

impact point does not leave the surface of the Earth.

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PART 415—LAUNCH LICENSE

■ 3. The authority citation for part 415 continues to read as follows:

Authority: 49 U.S.C. 70101–70121.

Subpart A—General

■ 4. Add § 415.8 to read as follows:

§ 415.8 Human space flight.

To obtain a launch license, an applicant proposing to conduct a launch with flight crew or a space flight participant on board must demonstrate compliance with §§ 460.5, 460.7, 460.11, 460.13, 460.15, 460.17, 460.51 and 460.53 of this subchapter.

PART 431—LAUNCH AND REENTRY OF A REUSABLE LAUNCH VEHICLE (RLV)

■ 5. The authority citation for part 431 continues to read as follows:

Authority: 49 U.S.C. 70101–70121.

■ 6. Add § 431.8 to read as follows:

§ 431.8 Human space flight.

To obtain a license, an applicant proposing to conduct a reusable launch vehicle mission with flight crew or a space flight participant on board must demonstrate compliance with §§ 460.5, 460.7, 460.11, 460.13, 460.15, 460.17, 460.51 and 460.53 of this subchapter.

PART 435—REENTRY OF A REENTRY VEHICLE OTHER THAN A REUSABLE LAUNCH VEHICLE (RLV)

■ 7. The authority citation for part 435 continues to read as follows:

Authority: 49 U.S.C. 70101–70121.

■ 8. Add § 435.8 to read as follows:

§ 435.8 Human space flight.

An applicant for a license to conduct a reentry with flight crew or a space flight participant on board the vehicle must demonstrate compliance with §§ 460.5, 460.7, 460.11, 460.13, 460.15, 460.17, 460.51 and 460.53 of this subchapter.

■ 9. Revise part 440 to read as set forth below:

PART 440—FINANCIAL RESPONSIBILITY

Subpart A—Financial Responsibility for Licensed and Permitted Activities

Sec.

440.1 Scope of part.

440.3 Definitions.

440.5 General.

440.7 Determination of maximum probable loss.

440.9 Insurance requirements for licensed or permitted activities.

440.11 Duration of coverage for licensed launch, including suborbital launch, or permitted activities; modifications.

440.12 Duration of coverage for licensed reentry; modifications.

440.13 Standard conditions of insurance coverage.

440.15 Demonstration of compliance.

440.17 Reciprocal waiver of claims requirements.

440.19 United States payment of excess third-party liability claims.

Appendix A to Part 440—Information requirements for obtaining a maximum probable loss determination for licensed or permitted activities.

Appendix B to Part 440—Agreement for waiver of claims and assumption of responsibility for licensed activities.

Appendix C to Part 440—Agreement for waiver of claims and assumption of responsibility for permitted activities.

Appendix D to Part 440—Agreement for waiver of claims and assumption of responsibility for a crew member.

Appendix E to Part 440—Agreement for waiver of claims and assumption of responsibility for a space flight participant.

Authority: 49 U.S.C. 70101–70119; 49 CFR 1.47.

Subpart A—Financial Responsibility for Licensed and Permitted Activities

§ 440.1 Scope of part.

This part establishes financial responsibility and allocation of risk requirements for any launch or reentry authorized by a license or permit issued under this subchapter.

§ 440.3 Definitions.

Except as otherwise provided in this section, any term used in this part and defined in 49 U.S.C. 70101–70121, or in § 401.5 of this chapter shall have the meaning contained therein. For purposes of this part—

Bodily injury means physical injury, sickness, disease, disability, shock, mental anguish, or mental injury sustained by any person, including death.

Contractors and subcontractors means those entities that are involved at any level, directly or indirectly, in licensed or permitted activities, and includes suppliers of property and services, and the component manufacturers of a launch vehicle, reentry vehicle, or payload.

Customer means.

(1) Any person:

(i) Who procures launch or reentry services from a licensee or permittee;

(ii) With rights in the payload (or any part of the payload) to be launched or

reentered by the licensee or permittee, including a conditional sale, lease, assignment, or transfer of rights;

(iii) Who has placed property on board the payload for launch, reentry, or payload services; or

(iv) To whom the customer has transferred its rights to the launch or reentry services.

(2) A space flight participant, for the purposes of this part, is not a customer.

Federal range facility means a U.S. Government-owned installation at which a launch or reentry takes place.

Financial responsibility means capable of satisfying a liability obligation as required by 49 U.S.C. Subtitle IX, chapter 701.

Government personnel means employees of the United States, its agencies, and its contractors and subcontractors, involved in launch or reentry services for an activity authorized by an FAA license or permit. Employees of the United States include members of the Armed Forces of the United States.

Hazardous operations means activities, processes, and procedures that, because of the nature of the equipment, facilities, personnel, environment involved or function being performed, may result in bodily injury or property damage.

Liability means a legal obligation to pay a claim for bodily injury or property damage resulting from a licensed or permitted activity.

License means an authorization the FAA issues under this subchapter to launch or reenter a launch or reentry vehicle.

Licensed activity means the launch of a launch vehicle or the reentry of a reentry vehicle conducted under a license the FAA issues.

Maximum probable loss (MPL) means the greatest dollar amount of loss for bodily injury or property damage that is reasonably expected to result from a licensed or permitted activity;

(1) Losses to third parties, excluding Government personnel and other launch or reentry participants' employees involved in licensed or permitted activities, that are reasonably expected to result from a licensed or permitted activity are those that have a probability of occurrence of no less than one in ten million.

(2) Losses to Government property and Government personnel involved in licensed or permitted activities that are reasonably expected to result from licensed or permitted activities are those that have a probability of occurrence of

no less than one in one hundred thousand.

Permit means an authorization the FAA issues under this subchapter for the launch or reentry of a reusable suborbital rocket.

Permitted activity means the launch or reentry of a reusable suborbital rocket conducted under a permit issued by the FAA.

Property damage means partial or total destruction, impairment, or loss of tangible property, real or personal.

Regulations mean the Commercial Space Transportation Licensing Regulations codified at 14 CFR Ch. III.

Third party means

(1) Any person other than:

(i) The United States, any of its agencies, and its contractors and subcontractors involved in launch or reentry services for a licensed or permitted activity;

(ii) A licensee, permittee, and its contractors and subcontractors involved in launch or reentry services for a licensed or permitted activity;

(iii) A customer and its contractors and subcontractors involved in launch or reentry services for a licensed or permitted activity;

(iv) A member of a crew; and

(v) A space flight participant.

(2) Government personnel, as defined in this section, are third parties.

United States means the United States Government, including each of its agencies.

§ 440.5 General.

(a) No person may commence or conduct any launch or reentry activity that requires a license or permit unless that person has demonstrated compliance with the requirements of this part.

(b) The FAA will prescribe the amount of financial responsibility a licensee or permittee must obtain and any adjustments of the amount in a license or permit order issued concurrent with or subsequent to the issuance of a license or a permit.

(c) Demonstration of financial responsibility under this part shall not relieve a licensee of ultimate responsibility for liability, loss, or damage sustained by the United States resulting from a licensed activity, except to the extent that:

(1) Liability, loss, or damage sustained by the United States results from willful misconduct of the United States or its agents;

(2) Any covered claim of a third party for bodily injury or property damage arising out of any particular licensed activity exceeds the amount of financial responsibility required under § 440.9(c)

of this part and does not exceed \$1,500,000,000 (as adjusted for inflation) above such amount, and are payable pursuant to 49 U.S.C. 70113 and § 440.19 of this part. A claim of an employee of any entity listed in paragraphs (1)(ii) through (1)(iii) in the *Third party* definition in § 440.3 of this part for bodily injury or property damage is not a covered claim;

(3) A covered claim for property loss or damage exceeds the amount of financial responsibility required under § 440.9(e) of this part and does not result from willful misconduct of the licensee; or

(4) The licensee has no liability for covered claims by third parties for bodily injury or property damage arising out of any particular launch or reentry that exceeds \$1,500,000,000 (as adjusted for inflation) above the amount of financial responsibility required under § 440.9(c).

(d) Demonstration of financial responsibility under this part does not relieve a permittee of ultimate responsibility for liability, loss, or damage sustained by the United States resulting from a permitted activity, except to the extent that:

(1) Liability, loss, or damage sustained by the United States results from willful misconduct of the United States or its agents; or

(2) A covered claim for property loss or damage to the United States exceeds the amount of financial responsibility required under § 440.9(e) and does not result from willful misconduct of the permittee.

(e) A licensee's or permittee's failure to comply with any requirement of this part may result in suspension or revocation of a license or permit, and subject the licensee or permittee to civil penalties as provided in part 405 of this chapter.

§ 440.7 Determination of maximum probable loss.

(a) The FAA will determine the maximum probable loss (MPL) from covered claims by a third party for bodily injury or property damage, and the United States, its agencies, and its contractors and subcontractors for covered property damage or loss, resulting from a permitted or licensed activity. The maximum probable loss determination forms the basis for financial responsibility requirements issued in a license or permit order.

(b) The FAA issues its determination of maximum probable loss no later than ninety days after a licensee or permittee has requested a determination and submitted all information required by the FAA to make the determination. The

FAA will consult with Federal agencies that are involved in, or whose personnel or property are exposed to risk of damage or loss as a result of, a licensed or permitted activity before issuing a license or permit order prescribing financial responsibility requirements, and shall notify the licensee, or permittee, if interagency consultation may delay issuance of the MPL determination.

(c) Appendix A of this part contains information requirements for obtaining a maximum probable loss determination. Any person requesting a determination of maximum probable loss must submit the information required by Appendix A, unless the FAA has waived a requirement. In lieu of submitting required information, a person requesting a maximum probable loss determination may designate and certify certain information previously submitted for a prior determination as complete, valid, and equally applicable to its current request. The requester is responsible for the continuing accuracy and completeness of information submitted under this part and must promptly report any changes in writing.

(d) The FAA will amend a determination of maximum probable loss required under this section at any time prior to completion of licensed or permitted activities as warranted by supplementary information provided to or obtained by the FAA after the MPL determination is issued. Any change in financial responsibility requirements as a result of an amended MPL determination shall be set forth in a license or permit order.

(e) The FAA may make a determination of maximum probable loss at any time other than as set forth in paragraph (b) of this section upon request by any person.

§ 440.9 Insurance requirements for licensed or permitted activities.

(a) As a condition of each license or permit, a licensee or permittee must comply with all insurance requirements of this section and of a license or permit issued by the FAA, or otherwise demonstrate the required amount of financial responsibility.

(b) A licensee or permittee must obtain and maintain in effect a policy or policies of liability insurance, in an amount determined by the FAA under paragraph (c) of this section, that protects the following persons as additional insureds to the extent of their respective potential liabilities against covered claims by a third party for bodily injury or property damage resulting from a licensed or permitted activity:

(1) The licensee or permittee, its customer, and their respective contractors and subcontractors, and the employees of each, involved in a licensed or permitted activity;

(2) The United States, its agencies, and its contractors and subcontractors involved in a licensed or permitted activity; and

(3) Government personnel.

(c) The FAA will prescribe for each licensee or permittee the amount of insurance required to compensate the total of covered third-party claims for bodily injury or property damage resulting from a licensed or permitted activity in connection with any particular launch or reentry. A covered third-party claim includes a claim by the United States, its agencies, and its contractors and subcontractors for damage or loss to property other than property for which insurance is required under paragraph (d) of this section. The amount of insurance required is based upon the FAA's determination of maximum probable loss; however, it will not exceed the lesser of:

(1) \$500 million; or

(2) The maximum liability insurance available on the world market at a reasonable cost, as determined by the FAA.

(d) The licensee or permittee must obtain and maintain in effect a policy or policies of insurance, in an amount determined by the FAA under paragraph (e) of this section, that covers claims by the United States, its agencies, and its contractors and subcontractors involved in a licensed or permitted activity for property damage or loss resulting from a licensed or permitted activity. Property covered by this insurance must include all property owned, leased, or occupied by, or within the care, custody, or control of, the United States and its agencies, and its contractors and subcontractors involved in a licensed or permitted activity, at a Federal range facility. Insurance must protect the United States and its agencies, and its contractors and subcontractors involved in a licensed or permitted activity.

(e) The FAA will prescribe for each licensee or permittee the amount of insurance required to compensate claims for property damage under paragraph (d) of this section resulting from a licensed or permitted activity in connection with any particular launch or reentry. The amount of insurance is based upon a determination of maximum probable loss; however, it will not exceed the lesser of:

(1) \$100 million; or

(2) The maximum available on the world market at a reasonable cost, as determined by the FAA.

(f) In lieu of a policy of insurance, a licensee or permittee may demonstrate financial responsibility in another manner meeting the terms and conditions for insurance of this part. The licensee or permittee must describe in detail the method proposed for demonstrating financial responsibility and how it ensures that the licensee or permittee is able to cover claims as required under this part.

§ 440.11 Duration of coverage for licensed launch, including suborbital launch, or permitted activities; modifications.

(a) Insurance coverage required under § 440.9, or other form of financial responsibility, shall attach when a licensed launch or permitted activity starts, and remain in full force and effect as follows:

(1) Until completion of licensed launch or permitted activities at a launch or reentry site; and

(2) For orbital launch, until the later of—

(i) Thirty days following payload separation, or attempted payload separation in the event of a payload separation anomaly; or

(ii) Thirty days from ignition of the launch vehicle.

(3) For a suborbital launch, until the later of—

(i) Motor impact and payload recovery; or

(ii) The FAA's determination that risk to third parties and Government property as a result of licensed launch or permitted activities is sufficiently small that financial responsibility is no longer necessary. That determination is made through the risk analysis conducted before the launch to determine MPL and specified in a license or permit order.

(b) Financial responsibility required under this part may not be replaced, canceled, changed, withdrawn, or in any way modified to reduce the limits of liability or the extent of coverage, nor expire by its own terms, prior to the time specified in a license or permit order, unless the FAA is notified at least 30 days in advance and expressly approves the modification.

§ 440.12 Duration of coverage for licensed reentry; modifications.

(a) For reentry, insurance coverage required under § 440.9, or other form of financial responsibility, shall attach upon commencement of licensed reentry, and remain in full force and effect as follows:

(1) For ground operations, until completion of licensed reentry at the reentry site; and

(2) For other licensed reentry activities, 30 days from initiation of reentry flight; however, in the event of an abort that results in the reentry vehicle remaining on orbit, insurance shall remain in place until the FAA's determination that risk to third parties and Government property as a result of licensed reentry is sufficiently small that financial responsibility is no longer necessary, as determined by the FAA through the risk analysis conducted to determine MPL and specified in a license order.

(b) Financial responsibility required under this part may not be replaced, canceled, changed, withdrawn, or in any way modified to reduce the limits of liability or the extent of coverage, nor expire by its own terms, prior to the time specified in a license order, unless the FAA is notified at least 30 days in advance and expressly approves the modification.

§ 440.13 Standard conditions of insurance coverage.

(a) Insurance obtained under § 440.9 must comply with each of the following terms and conditions of coverage:

(1) Bankruptcy or insolvency of an insured, including any additional insured, shall not relieve an insurer of any of its obligations under any policy.

(2) Policy limits shall apply separately to each occurrence and, for each occurrence to the total of claims arising out of a licensed or permitted activity in connection with any particular launch or reentry.

(3) Except as provided in this section, each policy must pay claims from the first dollar of loss, without regard to any deductible, to the limits of the policy. A licensee or permittee may obtain a policy containing a deductible amount if the amount of the deductible is placed in an escrow account or otherwise demonstrated to be unobligated, unencumbered funds of the licensee or permittee, available to compensate claims at any time claims may arise.

(4) No policy may be invalidated by any action or inaction of the licensee or permittee or any additional insured, even by nonpayment by the licensee or permittee of the policy premium, and each policy must insure the licensee or permittee and each additional insured regardless of any breach or violation of any warranties, declarations, or conditions contained in the policies by the licensee or permittee or any additional insured (other than a breach or violation by the licensee, permittee or an additional insured, and then only as

against that licensee, permittee or additional insured).

(5) Each exclusion from coverage must be specified.

(6) Insurance shall be primary without right of contribution from any other insurance that is carried by the licensee or permittee or any additional insured.

(7) Each policy must expressly provide that all of its provisions, except the policy limits, operate in the same manner as if there were a separate policy with and covering the licensee or permittee and each additional insured.

(8) Each policy must be placed with an insurer of recognized reputation and responsibility that either:

(i) Is licensed to do business in any State, territory, possession of the United States, or the District of Columbia; or

(ii) Includes in each of its policies or insurance obtained under this part a contract clause in which the insurer agrees to submit to the jurisdiction of a court of competent jurisdiction within the United States and designates an authorized agent within the United States for service of legal process on the insurer.

(9) Except as to claims resulting from the willful misconduct of the United States or any of its agents, the insurer shall waive any and all rights of subrogation against each of the parties protected by required insurance.

(b) [Reserved]

§ 440.15 Demonstration of compliance.

(a) A licensee or permittee must submit to the FAA evidence of financial responsibility and compliance with allocation of risk requirements under this part, as follows, unless a license or permit order specifies otherwise due to the proximity of the intended date for commencement of licensed or permitted activities:

(1) All reciprocal waiver of claims agreements required under § 440.17(c) must be submitted at least 30 days before the start of any licensed or permitted activity involving a customer, crew member, or space flight participant;

(2) Evidence of insurance must be submitted at least 30 days before commencement of any licensed launch or permitted activity, and for licensed reentry no less than 30 days before commencement of launch activities involving the reentry licensee;

(3) Evidence of financial responsibility in a form other than insurance, as provided under § 440.9(f), must be submitted at least 60 days before commencement of a licensed or permitted activity; and

(4) Evidence of renewal of insurance or other form of financial responsibility

must be submitted at least 30 days in advance of its expiration date.

(b) Upon a complete demonstration of compliance with financial responsibility and allocation of risk requirements under this part, the requirements of this part shall preempt each and any provision in any agreement between the licensee or permittee and an agency of the United States governing access to or use of United States launch or reentry property or launch or reentry services for a licensed or permitted activity which addresses financial responsibility, allocation of risk and related matters covered by 49 U.S.C. 70112, 70113.

(c) A licensee or permittee must demonstrate compliance as follows:

(1) The licensee or permittee must provide proof of the existence of the insurance required by § 440.9 by:

(i) Certifying to the FAA that it has obtained insurance in compliance with the requirements of this part and any applicable license or permit order;

(ii) Filing with the FAA one or more certificates of insurance evidencing insurance coverage by one or more insurers under a currently effective and properly endorsed policy or policies of insurance, applicable to a licensed or permitted activity, on terms and conditions and in amounts prescribed under this part, and specifying policy exclusions;

(iii) In the event of any policy exclusions or limitations of coverage that may be considered usual under § 440.19(c), or for purposes of implementing the Government's waiver of claims for property damage under 49 U.S.C. 70112(b)(2), certifying that insurance covering the excluded risks is not commercially available at reasonable cost; and

(iv) Submitting to the FAA, for signature by the Department on behalf of the United States Government, the waiver of claims and assumption of responsibility agreement required by § 440.17(c), executed by the licensee or permittee and its customer.

(v) Submitting to the FAA, for signature by the Department on behalf of the United States Government, an agreement to waive claims and assume responsibility required by § 440.17(e), executed by each space flight participant.

(vi) Submitting to the FAA, for signature by the Department on behalf of the United States Government, an agreement to waive claims and assume responsibility required by § 440.17(f), executed by each member of the crew.

(2) Any certification required by this section must be signed by a duly

authorized officer of the licensee or permittee.

(d) Each certificate of insurance required by paragraph (c)(1)(ii) of this section must be signed by the insurer issuing the policy and accompanied by an opinion of the insurance broker that the insurance obtained by the licensee or permittee complies with all the requirements for insurance of this part and any applicable license or permit order.

(e) The licensee or permittee must maintain, and make available for inspection by the FAA upon request, all required policies of insurance and other documents necessary to demonstrate compliance with this part.

(f) In the event the licensee or permittee demonstrates financial responsibility using means other than insurance, as provided under § 440.9(f), the licensee or permittee must provide proof that it has met the requirements of this part and of a FAA issued license or permit order.

§ 440.17 Reciprocal waiver of claims requirements.

(a) As a condition of each license or permit, the licensee or permittee must comply with the reciprocal waiver of claims requirements of this section.

(b) The licensee or permittee shall implement a reciprocal waiver of claims with each of its contractors and subcontractors, each customer and each of the customer's contractors and subcontractors, under which each party waives and releases claims against all the other parties to the waiver and agrees to assume financial responsibility for property damage it sustains and for bodily injury or property damage sustained by its own employees, and to hold harmless and indemnify each other from bodily injury or property damage sustained by its employees, resulting from a licensed or permitted activity, regardless of fault.

(c) For each licensed or permitted activity in which the U.S. Government, any agency, or its contractors and subcontractors is involved or where property insurance is required under § 440.9(d), the Federal Aviation Administration of the Department of Transportation, the licensee or permittee, and its customer shall enter into a three-party reciprocal waiver of claims agreement. The three-party reciprocal waiver of claims shall be in the form set forth in Appendix B of this part, for licensed activity, or Appendix C of this part, for permitted activity, of this part or in a form that satisfies the requirements.

(d) The licensee or permittee, its customer, and the Federal Aviation

Administration of the Department of Transportation on behalf of the United States and its agencies but only to the extent provided in legislation, must agree in any waiver of claims agreement required under this part to indemnify another party to the agreement from claims by the indemnifying party's contractors and subcontractors arising out of the indemnifying party's failure to implement properly the waiver requirement.

(e) For each licensed or permitted activity in which the U.S. Government, any of its agencies, or its contractors and subcontractors are involved, the Federal Aviation Administration of the Department of Transportation and each space flight participant shall enter into or have in place a reciprocal waiver of claims agreement in the form of the agreement in Appendix E of this part or that satisfies its requirements.

(f) For each licensed or permitted activity in which the U.S. Government, any of its agencies, or its contractors and subcontractors are involved, the Federal Aviation Administration of the Department of Transportation and each crew member shall enter into or have in place a reciprocal waiver of claims agreement in the form of the agreement in Appendix D of this part or that satisfies its requirements.

§ 440.19 United States payment of excess third-party liability claims.

(a) The United States pays successful covered claims (including reasonable expenses of litigation or settlement) of a third party against a licensee, a customer, and the contractors and subcontractors of the licensee and the customer, and the employees of each involved in licensed activities, and the contractors and subcontractors of the United States and its agencies, and their employees, involved in licensed activities to the extent provided in an appropriation law or other legislative authority providing for payment of claims in accordance with 49 U.S.C. 70113, and to the extent the total amount of such covered claims arising out of any particular launch or reentry:

- (1) Exceeds the amount of insurance required under § 440.9(b); and
- (2) Is not more than \$1,500,000,000 (as adjusted for inflation occurring after January 1, 1989) above that amount.

(b) Payment by the United States under paragraph (a) of this section shall not be made for any part of such claims for which bodily injury or property damage results from willful misconduct by the party seeking payment.

(c) The United States shall provide for payment of claims by third parties for bodily injury or property damage that

are payable under 49 U.S.C. 70113 and not covered by required insurance under § 440.9(b), without regard to the limitation under paragraph (a)(1) of this section, because of an insurance policy exclusion that is usual. A policy exclusion is considered usual only if insurance covering the excluded risk is not commercially available at reasonable rates. The licensee must submit a certification in accordance with § 440.15(c)(1)(iii) of this part for the United States to cover the claims.

(d) Upon the expiration of the policy period prescribed in accordance with § 440.11(a), the United States shall provide for payment of claims that are payable under 49 U.S.C. 70113 from the first dollar of loss up to \$1,500,000,000 (as adjusted for inflation occurring after January 1, 1989).

(e) Payment by the United States of excess third-party claims under 49 U.S.C. 70113 shall be subject to:

(1) Prompt notice by the licensee to the FAA that the total amount of claims arising out of licensed activities exceeds, or is likely to exceed, the required amount of financial responsibility. For each claim, the notice must specify the nature, cause, and amount of the claim or lawsuit associated with the claim, and the party or parties who may otherwise be liable for payment of the claim;

(2) Participation or assistance in the defense of the claim or lawsuit by the United States, at its election;

(3) Approval by the FAA of any settlement, or part of a settlement, to be paid by the United States; and

(4) Approval by Congress of a compensation plan prepared by the FAA and submitted by the President.

(f) The FAA will:

(1) Prepare a compensation plan outlining the total amount of claims and meeting the requirements set forth in 49 U.S.C. 70113;

(2) Recommend sources of funds to pay the claims; and

(3) Propose legislation as required to implement the plan.

(g) The FAA may withhold payment of a claim if it finds that the amount is unreasonable, unless it is the final order of a court that has jurisdiction over the matter.

Appendix A to Part 440—Information Requirements for Obtaining a Maximum Probable Loss Determination for Licensed or Permitted Activities

Any person requesting a maximum probable loss determination shall submit the following information to the FAA, unless the FAA has waived a particular information requirement under 14 CFR 440.7(c):

Part 1: Information Requirements for Licensed Launch, Including Suborbital Launch

I. General Information

- A. Mission description.
1. A description of mission parameters, including:
 - a. Launch trajectory;
 - b. Orbital inclination; and
 - c. Orbit altitudes (apogee and perigee).
 2. Flight sequence.
 3. Staging events and the time for each event.
 4. Impact locations.
 5. Identification of the launch site facility, including the launch complex on the site, planned date of launch, and launch windows.
 6. If the applicant has previously been issued a license or permit to conduct activities using the same vehicle from the same launch site, a description of any differences planned in the conduct of proposed activities.
- B. Launch vehicle description.
1. General description of the launch vehicle and its stages, including dimensions.
 2. Description of major systems, including safety systems.
 3. Description of rocket motors and type of fuel used.
 4. Identification of all propellants to be used and their hazard classification under the Hazardous Materials Table, 49 CFR 172.101.
 5. Description of hazardous components.
- C. Payload.
1. General description of the payload, including type (e.g., telecommunications, remote sensing), propellants, and hazardous components or materials, such as toxic or radioactive substances.
 2. Flight safety system.
 1. Identification of any flight safety system on the vehicle, including a description of operations and component location on the vehicle.

II. Pre-Flight Processing Operations

A. General description of pre-flight operations including vehicle processing consisting of an operational flow diagram showing the overall sequence and location of operations, commencing with arrival of vehicle components at the launch site facility through final safety checks and countdown sequence, and designation of hazardous operations, as defined in 14 CFR 440.3. For purposes of these information requirements, payload processing, as opposed to integration, is not a hazardous operation.

B. For each hazardous operation, including but not limited to fueling, solid rocket motor build-up, ordnance installation, ordnance checkout, movement of hazardous materials, and payload integration:

1. Identification of location where each operation will be performed, including each building or facility identified by name or number.
2. Identification of facilities adjacent to the location where each operation will be performed and therefore exposed to risk, identified by name or number.
3. Maximum number of Government personnel and individuals not involved in

licensed activities who may be exposed to risk during each operation. For Government personnel, identification of his or her employer.

4. Identification of launch site policies or requirements applicable to the conduct of operations.

III. Flight Operations

A. Identification of launch site facilities exposed to risk during licensed flight.

B. Identification of accident failure scenarios, probability assessments for each, and estimation of risks to Government personnel, individuals not involved in licensed activities, and Government property, due to property damage or bodily injury. The estimation of risks for each scenario shall take into account the number of such individuals at risk as a result of lift-off and flight of a launch vehicle (on-range, off-range, and down-range) and specific, unique facilities exposed to risk. Scenarios shall cover the range of launch trajectories, inclinations and orbits for which authorization is sought in the license application.

C. On-orbit risk analysis assessing risks posed by a launch vehicle to operational satellites.

D. Reentry risk analysis assessing risks to Government personnel and individuals not involved in licensed activities as a result of reentering debris or reentry of the launch vehicle or its components.

E. Trajectory data as follows: Nominal and 3-sigma lateral trajectory data in x, y, z and x (dot), y (dot), z (dot) coordinates in one-second intervals, data to be pad-centered with x being along the initial launch azimuth and continuing through impact for suborbital flights, and continuing through orbital insertion or the end of powered flight for orbital flights.

F. Tumble-turn data for guided vehicles only, as follows: For vehicles with gimbaled nozzles, tumble turn data with zeta angles and velocity magnitudes stated. A separate table is required for each combination of fail times (every two to four seconds), and significant nozzle angles (two or more small angles, generally between one and five degrees).

G. Identification of debris lethal areas and the projected number and ballistic coefficient of fragments expected to result from flight termination, initiated either by command or self-destruct mechanism, for lift-off, land overflight, and reentry.

IV. Post-Flight Processing Operations

A. General description of post-flight ground operations including overall sequence and location of operations for removal of vehicle components and processing equipment from the launch site facility and for handling of hazardous materials, and designation of hazardous operations.

B. Identification of all facilities used in conducting post-flight processing operations.

C. For each hazardous operation:

1. Identification of location where each operation is performed, including each building or facility identified by name or number.

2. Identification of facilities adjacent to location where each operation is performed

and exposed to risk, identified by name or number.

3. Maximum number of Government personnel and individuals not involved in licensed launch activities that may be exposed to risk during each operation. For Government personnel, identification of his or her employer.

4. Identification of launch site facility policies or requirements applicable to the conduct of operations.

Part 2: Information Requirements for Licensed Reentry

I. General Information

A. Reentry mission description.

1. A description of mission parameters, including:

- a. Orbital inclination; and
- b. Orbit altitudes (apogee and perigee).
- c. Reentry trajectories.

2. Reentry initiation events and the time for each event.

4. Nominal landing location, alternative landing sites and contingency abort sites.

5. Identification of landing facilities, (planned date of reentry), and reentry windows.

6. If the applicant has previously been issued a license or permit to conduct reentry activities using the same reentry vehicle to the same reentry site facility, a description of any differences planned in the conduct of proposed activities.

B. Reentry vehicle description.

1. General description of the reentry vehicle, including dimensions.

2. Description of major systems, including safety systems.

3. Description of propulsion system (reentry initiation system) and type of fuel used.

4. Identification of all propellants to be used and their hazard classification under the Hazardous Materials Table, 49 CFR 172.101.

5. Description of hazardous components.

C. Payload.

1. General description of any payload, including type (e.g., telecommunications, remote sensing), propellants, and hazardous components or materials, such as toxic or radioactive substances.

D. Flight Safety System.

1. Identification of any flight safety system on the reentry vehicle, including a description of operations and component location on the vehicle.

II. Flight Operations

A. Identification of reentry site facilities exposed to risk during vehicle reentry and landing.

B. Identification of accident failure scenarios, probability assessments for each, and estimation of risks to Government personnel, individuals not involved in licensed reentry, and Government property, due to property damage or bodily injury. The estimation of risks for each scenario shall take into account the number of such individuals at risk as a result of reentry (flight) and landing of a reentry vehicle (on-range, off-range, and down-range) and specific, unique facilities exposed to risk.

Scenarios shall cover the range of reentry trajectories for which authorization is sought.

C. On-orbit risk analysis assessing risks posed by a reentry vehicle to operational satellites during reentry.

D. Reentry risk analysis assessing risks to Government personnel and individuals not involved in licensed activities as a result of inadvertent or random reentry of the launch vehicle or its components.

E. Nominal and 3-sigma dispersed trajectories in one-second intervals, from reentry initiation through landing or impact. (Coordinate system will be specified on a case-by-case basis)

F. Three-sigma landing or impact dispersion area in downrange (\pm) and crossrange

(\pm) measured from the nominal and contingency landing or impact target. The applicant is responsible for including all significant landing or impact dispersion constituents in the computations of landing or impact dispersion areas. The dispersion constituents should include, but not be limited to: Variation in orbital position and velocity at the reentry initiation time; variation in re-entry initiation time offsets, either early or late; variation in the bodies' ballistic coefficient; position and velocity variation due to winds; and variations in re-entry retro-maneuvers.

G. Malfunction turn data (tumble, trim) for guided (controllable) vehicles. The malfunction turn data shall include the total angle turned by the velocity vector versus turn duration time at one second intervals; the magnitude of the velocity vector versus turn duration time at one second intervals; and an indication on the data where the re-entry body will impact the Earth, or breakup due to aerodynamic loads. A malfunction turn data set is required for each malfunction time. Malfunction turn start times shall not exceed four-second intervals along the trajectory.

H. Identification of debris casualty areas and the projected number and ballistic coefficient of fragments expected to result from each failure mode during reentry, including random reentry.

III. Post-Flight Processing Operations

A. General description of post-flight ground operations including overall sequence and location of operations for removal of vehicle and components and processing equipment from the reentry site facility and for handling of hazardous materials, and designation of hazardous operations.

B. Identification of all facilities used in conducting post-flight processing operations.

C. For each hazardous operation:

1. Identification of location where each operation is performed, including each building or facility identified by name or number.

2. Identification of facilities adjacent to location where each operation is performed and exposed to risk, identified by name or number.

3. Maximum number of Government personnel and individuals not involved in licensed reentry activities who may be exposed to risk during each operation. For

Government personnel, identification of his or her employer.

4. Identify and provide reentry site facility policies or requirements applicable to the conduct of operations.

Part 3: Information Requirements for Permitted Activities

In addition to the information required in part 437 subpart B, an applicant for an experimental permit must provide, for each permitted pre-flight and post-flight operation, the following information to the FAA:

A. Identification of location where each operation will be performed, including any U.S. Government or third party facilities identified by name or number.

B. Identification of any U.S. Government or third party facilities adjacent to the location where each operation will be performed and therefore exposed to risk, identified by name or number.

C. Maximum number of Government personnel and individuals not involved in permitted activities that may be exposed to risk during each operation. For Government personnel, identification of his or her employer.

Appendix B to Part 440—Agreement for Waiver of Claims and Assumption of Responsibility for Licensed Activities

Part 1—Waiver of Claims and Assumption of Responsibility for Licensed Launch, including Suborbital Launch

THIS AGREEMENT is entered into this ____ day of _____, by and among [Licensee] (the "Licensee"), [Customer] (the "Customer") and the Federal Aviation Administration of the Department of Transportation, on behalf of the United States Government (collectively, the "Parties"), to implement the provisions of section 440.17(c) of the Commercial Space Transportation Licensing Regulations, 14 CFR Ch. III (the "Regulations"). This agreement applies to the launch of [Payload] payload on a [Launch Vehicle] vehicle at [Location of Launch Site]. In consideration of the mutual releases and promises contained herein, the Parties hereby agree as follows:

1. Definitions

Contractors and Subcontractors means entities described in § 440.3 of the Regulations.

Customer means the above-named Customer on behalf of the Customer and any person described in § 440.3 of the Regulations.

License means License No. ____ issued on _____, by the Associate Administrator for Commercial Space Transportation, Federal Aviation Administration, Department of Transportation, to the Licensee, including all license orders issued in connection with the License.

Licensee means the Licensee and any transferee of the Licensee under 49 U.S.C. Subtitle IX, ch. 701.

United States means the United States and its agencies involved in Licensed Activities.

Except as otherwise defined herein, terms used in this Agreement and defined in 49 U.S.C. Subtitle IX, ch. 701—Commercial Space Launch Activities, or in the

Regulations, shall have the same meaning as contained in 49 U.S.C. Subtitle IX, ch. 701, or the Regulations, respectively.

2. Waiver and Release of Claims

(a) Licensee hereby waives and releases claims it may have against Customer and the United States, and against their respective Contractors and Subcontractors, for Property Damage it sustains and for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault.

(b) Customer hereby waives and releases claims it may have against Licensee and the United States, and against their respective Contractors and Subcontractors, for Property Damage it sustains and for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault.

(c) The United States hereby waives and releases claims it may have against Licensee and Customer, and against their respective Contractors and Subcontractors, for Property Damage it sustains, and for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault, to the extent that claims it would otherwise have for such damage or injury exceed the amount of insurance or demonstration of financial responsibility required under sections 440.9(c) and (e), respectively, of the Regulations.

3. Assumption of Responsibility

(a) Licensee and Customer shall each be responsible for Property Damage it sustains and for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault. Licensee and Customer shall each hold harmless and indemnify each other, the United States, and the Contractors and Subcontractors of each Party, for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault.

(b) The United States shall be responsible for Property Damage it sustains, and for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault, to the extent that claims it would otherwise have for such damage or injury exceed the amount of insurance or demonstration of financial responsibility required under sections 440.9(c) and (e), respectively, of the Regulations.

4. Extension of Assumption of Responsibility and Waiver and Release of Claims

(a) Licensee shall extend the requirements of the waiver and release of claims, and the assumption of responsibility, hold harmless, and indemnification, as set forth in paragraphs 2(a) and 3(a), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Customer and the United States, and against the respective Contractors and Subcontractors of each, and to agree to be responsible, for Property Damage they sustain and to be responsible, hold harmless and indemnify Customer and the United States, and the respective Contractors and

Subcontractors of each, for Bodily Injury or Property Damage sustained by their own employees, resulting from Licensed Activities, regardless of fault.

(b) Customer shall extend the requirements of the waiver and release of claims, and the assumption of responsibility, hold harmless, and indemnification, as set forth in paragraphs 2(b) and 3(a), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Licensee and the United States, and against the respective Contractors and Subcontractors of each, and to agree to be responsible, for Property Damage they sustain and to be responsible, hold harmless and indemnify Licensee and the United States, and the respective Contractors and Subcontractors of each, for Bodily Injury or Property Damage sustained by their own employees, resulting from Licensed Activities, regardless of fault.

(c) The United States shall extend the requirements of the waiver and release of claims, and the assumption of responsibility as set forth in paragraphs 2(c) and 3(b), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Licensee and Customer, and against the respective Contractors and Subcontractors of each, and to agree to be responsible, for any Property Damage they sustain and for any Bodily Injury or Property Damage sustained by their own employees, resulting from Licensed Activities, regardless of fault, to the extent that claims they would otherwise have for such damage or injury exceed the amount of insurance or demonstration of financial responsibility required under sections 440.9(c) and (e), respectively, of the Regulations.

5. Indemnification

(a) Licensee shall hold harmless and indemnify Customer and its directors, officers, servants, agents, subsidiaries, employees and assignees, or any of them, and the United States and its agencies, servants, agents, subsidiaries, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims that Licensee's Contractors and Subcontractors may have for Property Damage sustained by them and for Bodily Injury or Property Damage sustained by their employees, resulting from Licensed Activities.

(b) Customer shall hold harmless and indemnify Licensee and its directors, officers, servants, agents, subsidiaries, employees and assignees, or any of them, and the United States and its agencies, servants, agents, subsidiaries, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims that Customer's Contractors and Subcontractors, or any person on whose behalf Customer enters into this Agreement, may have for Property Damage sustained by them and for Bodily Injury or Property Damage sustained by their employees, resulting from Licensed Activities.

(c) To the extent provided in advance in an appropriations law or to the extent there is enacted additional legislative authority providing for the payment of claims, the

United States shall hold harmless and indemnify Licensee and Customer and their respective directors, officers, servants, agents, subsidiaries, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims that Contractors and Subcontractors of the United States may have for Property Damage sustained by them, and for Bodily Injury or Property Damage sustained by their employees, resulting from Licensed Activities, to the extent that claims they would otherwise have for such damage or injury exceed the amount of insurance or demonstration of financial responsibility required under sections 440.9(c) and (e), respectively, of the Regulations.

6. Assurances Under 49 U.S.C. 70112(e)

Notwithstanding any provision of this Agreement to the contrary, Licensee shall hold harmless and indemnify the United States and its agencies, servants, agents, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims for Bodily Injury or Property Damage, resulting from Licensed Activities, regardless of fault, except to the extent that: (i) As provided in section 7(b) of this Agreement, claims result from willful misconduct of the United States or its agents; (ii) claims for Property Damage sustained by the United States or its Contractors and Subcontractors exceed the amount of insurance or demonstration of financial responsibility required under section 440.9(e) of the Regulations; (iii) claims by a Third Party for Bodily Injury or Property Damage exceed the amount of insurance or demonstration of financial responsibility required under section 440.9(c) of the Regulations, and do not exceed \$1,500,000,000 (as adjusted for inflation after January 1, 1989) above such amount, and are payable pursuant to the provisions of 49 U.S.C. 70113 and section 440.19 of the Regulations; or (iv) Licensee has no liability for claims exceeding \$1,500,000,000 (as adjusted for inflation after January 1, 1989) above the amount of insurance or demonstration of financial responsibility required under section 440.9(c) of the Regulations.

7. Miscellaneous

(a) Nothing contained herein shall be construed as a waiver or release by Licensee, Customer or the United States of any claim by an employee of the Licensee, Customer or the United States, respectively, including a member of the Armed Forces of the United States, for Bodily Injury or Property Damage, resulting from Licensed Activities.

(b) Notwithstanding any provision of this Agreement to the contrary, any waiver, release, assumption of responsibility or agreement to hold harmless and indemnify herein shall not apply to claims for Bodily Injury or Property Damage resulting from willful misconduct of any of the Parties, the Contractors and Subcontractors of any of the Parties, and in the case of Licensee and Customer and the Contractors and Subcontractors of each of them, the directors, officers, agents and employees of any of the foregoing, and in the case of the United States, its agents.

(c) In the event that more than one customer is involved in Licensed Activities,

references herein to Customer shall apply to, and be deemed to include, each such customer severally and not jointly.

(d) This Agreement shall be governed by and construed in accordance with United States Federal law.

In witness whereof, the Parties to this Agreement have caused the Agreement to be duly executed by their respective duly authorized representatives as of the date written above.

LICENSEE

By: _____
Its: _____

CUSTOMER

By: _____
Its: _____

FEDERAL AVIATION ADMINISTRATION
OF THE DEPARTMENT OF
TRANSPORTATION ON BEHALF OF THE
UNITED STATES GOVERNMENT

By: _____
Its: _____

ASSOCIATE ADMINISTRATOR FOR
COMMERCIAL SPACE TRANSPORTATION

Part 2—Waiver of Claims and Assumption of Responsibility for Licensed Reentry

This Agreement is entered into this ____ day of _____, by and among [Licensee] (the "Licensee"), [Customer] (the "Customer"), and the Federal Aviation Administration of the Department of Transportation, on behalf of the United States Government (collectively, the "Parties"), to implement the provisions of § 440.17(c) of the Commercial Space Transportation Licensing Regulations, 14 CFR Ch. III (the "Regulations"). This agreement applies to the reentry of the [Payload] payload on a [Reentry Vehicle] vehicle.

In consideration of the mutual releases and promises contained herein, the Parties hereby agree as follows:

1. Definitions

Contractors and Subcontractors means entities described in § 440.3 of the Regulations.

Customer means the above-named Customer on behalf of the Customer and any person described in § 440.3 of the Regulations.

License means License No. ____ issued on _____, by the Associate Administrator for Commercial Space Transportation, Federal Aviation Administration, Department of Transportation, to the Licensee, including all license orders issued in connection with the License.

Licensee means the Licensee and any transferee of the Licensee under 49 U.S.C. Subtitle IX, ch. 701.

United States means the United States and its agencies involved in Licensed Activities.

Except as otherwise defined herein, terms used in this Agreement and defined in 49 U.S.C. Subtitle IX, ch. 701—Commercial Space Launch Activities, or in the Regulations, shall have the same meaning as contained in 49 U.S.C. Subtitle IX, ch. 701, or the Regulations, respectively.

2. Waiver and Release of Claims

(a) Licensee hereby waives and releases claims it may have against Customer and the United States, and against their respective Contractors and Subcontractors, for Property Damage it sustains and for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault.

(b) Customer hereby waives and releases claims it may have against Licensee and the United States, and against their respective Contractors and Subcontractors, for Property Damage it sustains and for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault.

(c) The United States hereby waives and releases claims it may have against Licensee and Customer, and against their respective Contractors and Subcontractors, for Property Damage it sustains, and for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault, to the extent that claims it would otherwise have for such damage or injury exceed the amount of insurance or demonstration of financial responsibility required under sections 440.9(c) and (e) of the Regulations.

3. Assumption of Responsibility

(a) Licensee and Customer shall each be responsible for Property Damage it sustains and for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault. Licensee and Customer shall each hold harmless and indemnify each other, the United States, and the Contractors and Subcontractors of each Party, for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault.

(b) The United States shall be responsible for Property Damage it sustains, and for Bodily Injury or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault, to the extent that claims it would otherwise have for such damage or injury exceed the amount of insurance or demonstration of financial responsibility required under §§ 440.9(c) and (e) of the Regulations.

4. Extension of Assumption of Responsibility and Waiver and Release of Claims

(a) Licensee shall extend the requirements of the waiver and release of claims, and the assumption of responsibility, hold harmless, and indemnification, as set forth in paragraphs 2(a) and 3(a), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Customer and the United States, and against the respective Contractors and Subcontractors of each, and to agree to be responsible, for Property Damage they sustain and to be responsible, hold harmless and indemnify Customer and the United States, and the respective Contractors and Subcontractors of each, for Bodily Injury or Property Damage sustained by their own employees, resulting from Licensed Activities, regardless of fault.

(b) Customer shall extend the requirements of the waiver and release of claims, and the

assumption of responsibility, hold harmless, and indemnification, as set forth in paragraphs 2(b) and 3(a), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Licensee and the United States, and against the respective Contractors and Subcontractors of each, and to agree to be responsible, for Property Damage they sustain and to be responsible, hold harmless and indemnify Licensee and the United States, and the respective Contractors and Subcontractors of each, for Bodily Injury or Property Damage sustained by their own employees, resulting from Licensed Activities, regardless of fault.

(c) The United States shall extend the requirements of the waiver and release of claims, and the assumption of responsibility as set forth in paragraphs 2(c) and 3(b), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Licensee and Customer, and against the respective Contractors and Subcontractors of each, and to agree to be responsible, for any Property Damage they sustain and for any Bodily Injury or Property Damage sustained by their own employees, resulting from Licensed Activities, regardless of fault, to the extent that claims they would otherwise have for such damage or injury exceed the amount of insurance or demonstration of financial responsibility required under §§ 440.9(c) and (e) of the Regulations.

5. Indemnification

(a) Licensee shall hold harmless and indemnify Customer and its directors, officers, servants, agents, subsidiaries, employees and assignees, or any of them, and the United States and its agencies, servants, agents, subsidiaries, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims that Licensee's Contractors and Subcontractors may have for Property Damage sustained by them and for Bodily Injury or Property Damage sustained by their employees, resulting from Licensed Activities.

(b) Customer shall hold harmless and indemnify Licensee and its directors, officers, servants, agents, subsidiaries, employees and assignees, or any of them, and the United States and its agencies, servants, agents, subsidiaries, employees assignees, or any of them, from and against liability, loss or damage arising out of claims that Customer's Contractors and Subcontractors, or any person on whose behalf Customer enters into this Agreement, may have for Property Damage sustained by them and for Bodily Injury or Property Damage sustained by their employees, resulting from Licensed Activities.

(c) To the extent provided in advance in an appropriations law or to the extent there is enacted additional legislative authority providing for the payment of claims, the United States shall hold harmless and indemnify Licensee and Customer and their respective directors, officers, servants, agents, subsidiaries, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims that Contractors and Subcontractors of the United States may

have for Property Damage sustained by them, and for Bodily Injury or Property Damage sustained by their employees, resulting from Licensed Activities, to the extent that claims they would otherwise have for such damage or injury exceed the amount of insurance or demonstration of financial responsibility required under §§ 440.9(c) and (e) of the Regulations.

6. Assurances Under 49 U.S.C. 70112(e)

Notwithstanding any provision of this Agreement to the contrary, Licensee shall hold harmless and indemnify the United States and its agencies, servants, agents, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims for Bodily Injury or Property Damage, resulting from Licensed Activities, regardless of fault, except to the extent that: (i) As provided in section 7(b) of this Agreement, claims result from willful misconduct of the United States or its agents; (ii) claims for Property Damage sustained by the United States or its Contractors and Subcontractors exceed the amount of insurance or demonstration of financial responsibility required under § 440.9(e) of the Regulations; (iii) claims by a Third Party for Bodily Injury or Property Damage exceed the amount of insurance or demonstration of financial responsibility required under § 440.9(c) of the Regulations, and do not exceed \$1,500,000,000 (as adjusted for inflation after January 1, 1989) above such amount, and are payable pursuant to the provisions of 49 U.S.C. 70113 and § 440.19 of the Regulations; or (iv) Licensee has no liability for claims exceeding \$1,500,000,000 (as adjusted for inflation after January 1, 1989) above the amount of insurance or demonstration of financial responsibility required under § 440.9(c) of the Regulations.

7. Miscellaneous

(a) Nothing contained herein shall be construed as a waiver or release by Licensee, Customer or the United States of any claim by an employee of the Licensee, Customer or the United States, respectively, including a member of the Armed Forces of the United States, for Bodily Injury or Property Damage, resulting from Licensed Activities.

(b) Notwithstanding any provision of this Agreement to the contrary, any waiver, release, assumption of responsibility or agreement to hold harmless and indemnify herein shall not apply to claims for Bodily Injury or Property Damage resulting from willful misconduct of any of the Parties, the Contractors and Subcontractors of any of the Parties, and in the case of Licensee and Customer and the Contractors and Subcontractors of each of them, the directors, officers, agents and employees of any of the foregoing, and in the case of the United States, its agents.

(c) In the event that more than one customer is involved in Licensed Activities, references herein to Customer shall apply to, and be deemed to include, each such customer severally and not jointly.

(d) This Agreement shall be governed by and construed in accordance with United States Federal law.

In Witness Whereof, the Parties to this Agreement have caused the Agreement to be

duly executed by their respective duly authorized representatives as of the date written above.

LICENSEE

By: _____
Its: _____

CUSTOMER

By: _____
Its: _____

FEDERAL AVIATION ADMINISTRATION
OF THE DEPARTMENT OF
TRANSPORTATION ON BEHALF OF THE
UNITED STATES GOVERNMENT

By: _____
Its: _____

ASSOCIATE ADMINISTRATOR FOR
COMMERCIAL SPACE TRANSPORTATION

Appendix C to Part 440—Agreement for Waiver of Claims and Assumption of Responsibility for Permitted Activities

THIS AGREEMENT is entered into this ___ day of ___, by and among [Permittee] (the "Permittee"), [Customer] (the "Customer") and the Federal Aviation Administration of the Department of Transportation, on behalf of the United States Government (collectively, the "Parties"), to implement the provisions of section 440.17(c) of the Commercial Space Transportation Licensing Regulations, 14 CFR Ch. III (the "Regulations"). This agreement applies to [describe permitted activity].

In consideration of the mutual releases and promises contained herein, the Parties hereby agree as follows:

1. Definitions

Customer means the above-named Customer on behalf of the Customer and any person described in § 440.3 of the Regulations.

Permit means Permit No. ___ issued on ___, by the Associate Administrator for Commercial Space Transportation, Federal Aviation Administration, Department of Transportation, to the Permittee, including all permit orders issued in connection with the Permit.

Permittee means the holder of the Permit issued under 49 U.S.C. Subtitle IX, ch. 701.

United States means the United States and its agencies involved in Permitted Activities.

Except as otherwise defined herein, terms used in this Agreement and defined in 49 U.S.C. Subtitle IX, ch. 701—Commercial Space Launch Activities, or in the Regulations, shall have the same meaning as contained in 49 U.S.C. Subtitle IX, ch. 701, or the Regulations, respectively.

2. Waiver and Release of Claims

(a) Permittee hereby waives and releases claims it may have against Customer and the United States, and against their respective Contractors and Subcontractors, for Property Damage it sustains and for Bodily Injury or Property Damage sustained by its own employees, resulting from Permitted Activities, regardless of fault.

(b) Customer hereby waives and releases claims it may have against Permittee and the United States, and against their respective Contractors and Subcontractors, for Property

Damage it sustains and for Bodily Injury or Property Damage sustained by its own employees, resulting from Permitted Activities, regardless of fault.

(c) The United States hereby waives and releases claims it may have against Permittee and Customer, and against their respective Contractors and Subcontractors, for Property Damage it sustains resulting from Permitted Activities, regardless of fault, to the extent that claims it would otherwise have for such damage exceed the amount of insurance or demonstration of financial responsibility required under section 440.9(e) of the Regulations.

3. Assumption of Responsibility

(a) Permittee and Customer shall each be responsible for Property Damage it sustains and for Bodily Injury or Property Damage sustained by its own employees, resulting from Permitted Activities, regardless of fault. Permittee and Customer shall each hold harmless and indemnify each other, the United States, and the Contractors and Subcontractors of each Party, for Bodily Injury or Property Damage sustained by its own employees, resulting from Permitted Activities, regardless of fault.

(b) The United States shall be responsible for Property Damage it sustains, resulting from Permitted Activities, regardless of fault, to the extent that claims it would otherwise have for such damage exceed the amount of insurance or demonstration of financial responsibility required under section 440.9(e) of the Regulations.

4. Extension of Assumption of Responsibility and Waiver and Release of Claims

(a) Permittee shall extend the requirements of the waiver and release of claims, and the assumption of responsibility, hold harmless, and indemnification, as set forth in paragraphs 2(a) and 3(a), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Customer and the United States, and against the respective Contractors and Subcontractors of each, and to agree to be responsible, for Property Damage they sustain and to be responsible, hold harmless and indemnify Customer and the United States, and the respective Contractors and Subcontractors of each, for Bodily Injury or Property Damage sustained by their own employees, resulting from Permitted Activities, regardless of fault.

(b) Customer shall extend the requirements of the waiver and release of claims, and the assumption of responsibility, hold harmless, and indemnification, as set forth in paragraphs 2(b) and 3(a), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Permittee and the United States, and against the respective Contractors and Subcontractors of each, and to agree to be responsible, for Property Damage they sustain and to be responsible, hold harmless and indemnify Permittee and the United States, and the respective Contractors and Subcontractors of each, for Bodily Injury or Property Damage sustained by their own employees, resulting from Permitted Activities, regardless of fault.

(c) The United States shall extend the requirements of the waiver and release of

claims, and the assumption of responsibility as set forth in paragraphs 2(c) and 3(b), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Permittee and Customer, and against the respective Contractors and Subcontractors of each, and to agree to be responsible, for any Property Damage they sustain, resulting from Permitted Activities, regardless of fault, to the extent that claims they would otherwise have for such damage exceed the amount of insurance or demonstration of financial responsibility required under section 440.9(e) of the Regulations.

5. Indemnification

(a) Permittee shall hold harmless and indemnify Customer and its directors, officers, servants, agents, subsidiaries, employees and assignees, or any of them, and the United States and its agencies, servants, agents, subsidiaries, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims that Permittee's Contractors and Subcontractors may have for Property Damage sustained by them and for Bodily Injury or Property Damage sustained by their employees, resulting from Permitted Activities.

(b) Customer shall hold harmless and indemnify Permittee and its directors, officers, servants, agents, subsidiaries, employees and assignees, or any of them, and the United States and its agencies, servants, agents, subsidiaries, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims that Customer's Contractors and Subcontractors, or any person on whose behalf Customer enters into this Agreement, may have for Property Damage sustained by them and for Bodily Injury or Property Damage sustained by their employees, resulting from Permitted Activities.

6. Assurances Under 49 U.S.C. 70112(e)

Notwithstanding any provision of this Agreement to the contrary, Permittee shall hold harmless and indemnify the United States and its agencies, servants, agents, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims for Bodily Injury or Property Damage, resulting from Permitted Activities, regardless of fault, except to the extent that it is provided in section 7(b) of this Agreement, except to the extent that claims (i) result from willful misconduct of the United States or its agents and (ii) for Property Damage sustained by the United States or its Contractors and Subcontractors exceed the amount of insurance or demonstration of financial responsibility required under section 440.9(e) of the Regulations.

7. Miscellaneous

(a) Nothing contained herein shall be construed as a waiver or release by Permittee, Customer or the United States of any claim by an employee of the Permittee, Customer or the United States, respectively, including a member of the Armed Forces of the United States, for Bodily Injury or Property Damage, resulting from Permitted Activities.

(b) Notwithstanding any provision of this Agreement to the contrary, any waiver, release, assumption of responsibility or agreement to hold harmless and indemnify herein shall not apply to claims for Bodily Injury or Property Damage resulting from willful misconduct of any of the Parties, the Contractors and Subcontractors of any of the Parties, and in the case of Permittee and Customer and the Contractors and Subcontractors of each of them, the directors, officers, agents and employees of any of the foregoing, and in the case of the United States, its agents.

(c) In the event that more than one customer is involved in Permitted Activities, references herein to Customer shall apply to, and be deemed to include, each such customer severally and not jointly.

(d) This Agreement shall be governed by and construed in accordance with United States Federal law.

IN WITNESS WHEREOF, the Parties to this Agreement have caused the Agreement to be duly executed by their respective duly authorized representatives as of the date written above.

PERMITTEE

By: _____
Its: _____

CUSTOMER

By: _____
Its: _____

FEDERAL AVIATION ADMINISTRATION
OF THE DEPARTMENT OF
TRANSPORTATION ON BEHALF OF THE
UNITED STATES GOVERNMENT

By: _____
Its: _____

ASSOCIATE ADMINISTRATOR FOR
COMMERCIAL SPACE TRANSPORTATION

Appendix D to Part 440—Agreement for Waiver of Claims and Assumption of Responsibility for a Crew Member

THIS AGREEMENT is entered into this ____ day of _____, by and among [name of Crew Member] (the "Crew Member") and the Federal Aviation Administration of the Department of Transportation, on behalf of the United States Government (collectively, the "Parties"), to implement the provisions of section 440.17(f) of the Commercial Space Transportation Licensing Regulations, 14 CFR Ch. III (the "Regulations"). This agreement applies to the Crew Member's participation in activities that the FAA has authorized by license or permit during the Crew Member's employment with [Name of licensee or permittee].

In consideration of the mutual releases and promises contained herein, the Parties hereby agree as follows:

1. Definitions

Crew Member means

(a) The above-named Crew Member,
(b) All the heirs, administrators, executors, assignees, next of kin, and estate of the above-named Crew Member, and

(c) Anyone who attempts to bring a claim on behalf of the Crew Member or for damage or harm arising out of the Bodily Injury, including Death, of the Crew Member.

License/Permit means License/Permit No. _____ issued on _____, by the Associate Administrator for Commercial Space Transportation, Federal Aviation Administration, Department of Transportation, to the Licensee/Permittee, including all license/permit orders issued in connection with the License/Permit.

Licensee/Permittee means the Licensee/Permittee and any transferee of the Licensee under 49 U.S.C. Subtitle IX, ch. 701.

United States means the United States and its agencies involved in Licensed/Permitted Activities.

Except as otherwise defined herein, terms used in this Agreement and defined in 49 U.S.C. Subtitle IX, ch. 701—Commercial Space Launch Activities, or in the Regulations, shall have the same meaning as contained in 49 U.S.C. Subtitle IX, ch. 701, or the Regulations, respectively.

2. Waiver and Release of Claims

(a) Crew Member hereby waives and releases claims it may have against the United States, and against its respective Contractors and Subcontractors, for Bodily Injury, including Death, or Property Damage sustained by Crew Member, resulting from Licensed/Permitted Activities, regardless of fault.

(b) The United States hereby waives and releases claims it may have against the Crew Member for Property Damage it sustains, and for Bodily Injury, including Death, or Property Damage sustained by its own employees, resulting from Licensed/Permitted Activities, regardless of fault.

3. Assumption of Responsibility

(a) The Crew Member shall be responsible for Bodily Injury, including Death, or Property Damage sustained by Crew Member, resulting from Licensed/Permitted Activities, regardless of fault. The Crew Member shall hold harmless the United States, and the Contractors and Subcontractors of each Party, for Bodily Injury, including Death, or Property Damage sustained by Crew Member, resulting from Licensed/Permitted Activities, regardless of fault.

(b) The United States shall be responsible for Property Damage it sustains, and for Bodily Injury, including Death, or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault, to the extent that claims it would otherwise have for such damage or injury exceed the amount of insurance or demonstration of financial responsibility required under sections 440.9(c) and (e), respectively, of the Regulations.

(c) The United States shall be responsible for Property Damage it sustains, resulting from Permitted Activities, regardless of fault, to the extent that claims it would otherwise have for such damage exceed the amount of insurance or demonstration of financial responsibility required under section 440.9(e) of the Regulations.

4. Extension of Assumption of Responsibility and Waiver and Release of Claims

(a) The United States shall extend the requirements of the waiver and release of claims, and the assumption of responsibility as set forth in paragraphs 2(b) and 3(b),

respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Crew Member and to agree to be responsible, for any Property Damage the Contractors and Subcontractors sustain and for any Bodily Injury, including Death, or Property Damage sustained by their own employees, resulting from Licensed Activities, regardless of fault.

(b) The United States shall extend the requirements of the waiver and release of claims, and the assumption of responsibility as set forth in paragraphs 2(b) and 3(c), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims the Contractors and Subcontractors may have against Crew Member and to agree to be responsible, for any Property Damage they sustain, resulting from Permitted Activities, regardless of fault.

5. Indemnification

Crew Member shall hold harmless and indemnify the United States and its agencies, servants, agents, subsidiaries, employees and assignees, or any of them, from and against liability, loss, or damage arising out of claims brought by anyone for Property Damage or Bodily Injury, including Death, sustained by Crew Member, resulting from Licensed/Permitted Activities.

6. Assurances Under 49 U.S.C. 70112(e)

Notwithstanding any provision of this Agreement to the contrary, Crew Member shall hold harmless the United States and its agencies, servants, agents, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims for Bodily Injury, including Death, or Property Damage, sustained by Crew Member, resulting from Licensed/Permitted Activities, regardless of fault, except to the extent that, as provided in section 6(b) of this Agreement, claims result from willful misconduct of the United States or its agents.

7. Miscellaneous

(a) Nothing contained herein shall be construed as a waiver or release by the United States of any claim by an employee of the United States, respectively, including a member of the Armed Forces of the United States, for Bodily Injury or Property Damage, resulting from Licensed/Permitted Activities.

(b) Notwithstanding any provision of this Agreement to the contrary, any waiver, release, assumption of responsibility or agreement to hold harmless herein shall not apply to claims for Bodily Injury, including Death, or Property Damage resulting from willful misconduct of any of the Parties, the Contractors and Subcontractors of any of the Parties, and in the case of the United States, its agents.

(c) This Agreement shall be governed by and construed in accordance with United States Federal law.

IN WITNESS WHEREOF, the Parties to this Agreement have caused the Agreement to be duly executed by their respective duly authorized representatives as of the date written above.

I [name of Crew Member] have read and understand this agreement and agree that I am bound by it.

CREW MEMBER

Signature: _____

Printed Name: _____

FEDERAL AVIATION ADMINISTRATION
OF THE DEPARTMENT OF
TRANSPORTATION ON BEHALF OF THE
UNITED STATES GOVERNMENT

By: _____

Its: _____

ASSOCIATE ADMINISTRATOR FOR
COMMERCIAL SPACE TRANSPORTATION

Appendix E to Part 440—Agreement for Waiver of Claims and Assumption of Responsibility for a Space Flight Participant

THIS AGREEMENT is entered into this _____ day of _____, by and among [name of Space Flight Participant] (the "Space Flight Participant") and the Federal Aviation Administration of the Department of Transportation, on behalf of the United States Government (collectively, the "Parties"), to implement the provisions of section 440.17(e) of the Commercial Space Transportation Licensing Regulations, 14 CFR Ch. III (the "Regulations"). This agreement applies to Space Flight Participant's travel on [name of launch or reentry vehicle] of [name of Licensee or Permittee]. In consideration of the mutual releases and promises contained herein, the Parties hereby agree as follows:

1. Definitions

Space Flight Participant means

(a) The above-named Space Flight Participant,

(b) All the heirs, administrators, executors, assignees, next of kin, and estate of the above-named Space Flight Participant, and

(c) Anyone who attempts to bring a claim on behalf of the Space Flight Participant or for damage or harm arising out of the Bodily Injury, including Death, of the Space Flight Participant.

License/Permit means License/Permit No. _____ issued on _____, by the Associate Administrator for Commercial Space Transportation, Federal Aviation Administration, Department of Transportation, to the Licensee/Permittee, including all license/permit orders issued in connection with the License/Permit.

Licensee/Permittee means the Licensee/Permittee and any transferee of the Licensee under 49 U.S.C. Subtitle IX, ch. 701.

United States means the United States and its agencies involved in Licensed/Permitted Activities.

Except as otherwise defined herein, terms used in this Agreement and defined in 49 U.S.C. Subtitle IX, ch. 701—Commercial Space Launch Activities, or in the Regulations, shall have the same meaning as contained in 49 U.S.C. Subtitle IX, ch. 701, or the Regulations, respectively.

2. Waiver and Release of Claims

(a) Space Flight Participant hereby waives and releases claims it may have against the United States, and against its respective Contractors and Subcontractors, for Bodily Injury, including Death, or Property Damage sustained by Space Flight Participant,

resulting from Licensed/Permitted Activities, regardless of fault.

(b) The United States hereby waives and releases claims it may have against Space Flight Participant for Property Damage it sustains, and for Bodily Injury, including Death, or Property Damage sustained by its own employees, resulting from Licensed/Permitted Activities, regardless of fault.

3. Assumption of Responsibility

(a) Space Flight Participant shall be responsible for Bodily Injury, including Death, or Property Damage sustained by the Space Flight Participant resulting from Licensed/Permitted Activities, regardless of fault. Space Flight Participant shall hold harmless the United States, and its Contractors and Subcontractors, for Bodily Injury, including Death, or Property Damage sustained by Space Flight Participant from Licensed/Permitted Activities, regardless of fault.

(b) The United States shall be responsible for Property Damage it sustains, and for Bodily Injury, including Death, or Property Damage sustained by its own employees, resulting from Licensed Activities, regardless of fault, to the extent that claims it would otherwise have for such damage or injury exceed the amount of insurance or demonstration of financial responsibility required under sections 440.9(c) and (e), respectively, of the Regulations.

(c) The United States shall be responsible for Property Damage it sustains, resulting from Permitted Activities, regardless of fault, to the extent that claims it would otherwise have for such damage exceed the amount of insurance or demonstration of financial responsibility required under section 440.9(e) of the Regulations.

4. Extension of Assumption of Responsibility and Waiver and Release of Claims

(a) The United States shall extend the requirements of the waiver and release of claims, and the assumption of responsibility as set forth in paragraphs 2(b) and 3(b), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Space Flight Participant, and to agree to be responsible, for any Property Damage they sustain and for any Bodily Injury, including Death, or Property Damage sustained by their own employees, resulting from Licensed Activities, regardless of fault.

(b) The United States shall extend the requirements of the waiver and release of claims, and the assumption of responsibility as set forth in paragraphs 2(b) and 3(c), respectively, to its Contractors and Subcontractors by requiring them to waive and release all claims they may have against Space Flight Participant, and to agree to be responsible, for any Property Damage the Contractors and Subcontractors sustain, resulting from Permitted Activities, regardless of fault.

5. Indemnification

Space Flight Participant shall hold harmless and indemnify the United States and its agencies, servants, agents, subsidiaries, employees and assignees, or any of them, from and against liability, loss or

damage arising out of claims brought by anyone for Property Damage or Bodily Injury, including Death, sustained by Space Flight Participant, resulting from Licensed/Permitted Activities.

6. Assurances Under 49 U.S.C. 70112(e)

Notwithstanding any provision of this Agreement to the contrary, Space Flight Participant shall hold harmless the United States and its agencies, servants, agents, employees and assignees, or any of them, from and against liability, loss or damage arising out of claims for Bodily Injury, including Death, or Property Damage, sustained by Space Flight Participant, resulting from Licensed/Permitted Activities, regardless of fault, except to the extent that, as provided in section 6(b) of this Agreement, claims result from willful misconduct of the United States or its agents.

7. Miscellaneous

(a) Nothing contained herein shall be construed as a waiver or release by the United States of any claim by an employee of the United States, respectively, including a member of the Armed Forces of the United States, for Bodily Injury or Property Damage, resulting from Licensed/Permitted Activities.

(b) Notwithstanding any provision of this Agreement to the contrary, any waiver, release, assumption of responsibility or agreement to hold harmless herein shall not apply to claims for Bodily Injury, including Death, or Property Damage resulting from willful misconduct of any of the Parties, the Contractors, Subcontractors, and agents of the United States, and Space Flight Participant.

(c) This Agreement shall be governed by and construed in accordance with United States Federal law.

IN WITNESS WHEREOF, the Parties to this Agreement have caused the Agreement to be duly executed by their respective duly authorized representatives as of the date written above.

I [name of Space Flight Participant] have read and understand this agreement and agree that I am bound by it.

SPACE FLIGHT PARTICIPANT

Signature: _____

Printed Name: _____

FEDERAL AVIATION ADMINISTRATION
OF THE DEPARTMENT OF
TRANSPORTATION ON BEHALF OF THE
UNITED STATES GOVERNMENT

By: _____

Its: _____

ASSOCIATE ADMINISTRATOR FOR
COMMERCIAL SPACE TRANSPORTATION

PART 450—[REMOVED]

■ 10. Remove part 450.

■ 11. Add part 460 to read as follows:

PART 460—HUMAN SPACE FLIGHT REQUIREMENTS

Subpart A—Launch and reentry with crew

Sec.

460.1 Scope.

460.3 Applicability.

460.5 Crew qualifications and training.

460.7 Operator training of crew.

460.9 Informing crew of risk.

460.11 Environmental control and life support systems.

460.13 Smoke detection and fire suppression.

460.15 Human factors.

460.17 Verification program.

460.19 Crew waiver of claims against U.S. Government.

460.20–460.40 [Reserved]

Subpart B—Launch and reentry with a space flight participant

460.41 Scope.

460.43 Applicability.

460.45 Operator informing space flight participant of risk.

460.47 [Reserved]

460.49 Space flight participant waiver of claims against U.S. Government.

460.51 Space flight participant training.

460.53 Security.

Authority: 49 U.S.C. 70105.

Subpart A—Launch and reentry with crew

§ 460.1 Scope.

This subpart establishes requirements for crew of a vehicle whose operator is licensed or permitted under this chapter.

§ 460.3 Applicability.

(a) This subpart applies to:

(1) An applicant for a license or permit under this chapter who proposes to have flight crew on board a vehicle or proposes to employ a remote operator of a vehicle with a human on board.

(2) An operator licensed or permitted under this chapter who has flight crew on board a vehicle or who employs a remote operator of a vehicle with a human on board.

(3) A crew member participating in an activity authorized under this chapter.

(b) Each member of the crew must comply with all requirements of the laws of the United States that apply to crew.

§ 460.5 Crew qualifications and training.

(a) Each crew member must—

(1) Complete training on how to carry out his or her role on board or on the ground so that the vehicle will not harm the public; and

(2) Train for his or her role in nominal and non-nominal conditions. The conditions must include—

(i) Abort scenarios; and

(ii) Emergency operations.

(b) Each member of a flight crew must demonstrate an ability to withstand the stresses of space flight, which may include high acceleration or deceleration, microgravity, and