DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 440

[Docket 28635; Amendment No. 98–1]

RIN 2120–AF98

Financial Responsibility Requirements for Licensed Launch Activities

AGENCY: Federal Aviation Administration, Associate Administrator for Commercial Space Transportation, DOT.

ACTION: Final rule.

SUMMARY: Under its licensing authority, the Associate Administrator for Commercial Space Transportation (AST) of the Federal Aviation Administration (FAA) determines financial responsibility requirements for licensees authorized to conduct commercial space launch activities. This rulemaking establishes procedures for demonstrating compliance with those requirements and for implementing risk allocation provisions of 49 U.S.C. Subtitle IX, chapter 701, formerly the Commercial Space Launch Act of 1984, as amended.

DATES: This final rule is effective on October 26, 1998.

FOR FURTHER INFORMATION CONTACT: Ms. Esta M. Rosenberg, Attorney-Advisor, Regulations Division, Office of the Chief Counsel, Federal Aviation Administration, U.S. Department of Transportation, (202) 366–9320.

SUPPLEMENTARY INFORMATION:

Availability of Final Rules

An electronic copy of this document may be downloaded, using a modem and suitable communications software, from the FAA regulations section of the Fedworld electronic bulletin board service (telephone: 703–321–3339), the **Federal Register's** electronic bulletin board service (telephone: 202–512–1661), or the FAA's Aviation Rulemaking Advisory Committee Bulletin Board service (telephone: 800–322–2722 or 202–267–5948).

Internet users may reach the FAA's web page at http://www.faa.gov/avr/arm/nprm/nprm.htm or the **Federal Register's** webpage at http://www.access.gpo.gov/su__docs/aces/aces140.html for access to recently published rulemaking documents.

Any person may obtain a copy of this final rule by submitting a request to the Federal Aviation Administration, Office of Rulemaking, ARM–1, 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267–9680. Communications must identify the amendment number or docket number of this final rule.

Persons interested in being placed on the mailing list for future Notices of Proposed Rulemaking and Final Rules should request from the above office a copy of Advisory Circular No. 11–2A, Notice of Proposed Rulemaking Distribution System, that describes the application procedure.

Small Entity Inquiries

The Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA) requires the FAA to report inquiries from small entities concerning information on, and advice about, compliance with statutes and regulations within the FAA's jurisdiction, including interpretation and application of the law to specific sets of facts supplied by a small entity.

If you are a small entity and have a question, contact your local FAA official. If you do not know how to contact your local FAA official, you may contact Charlene Brown, Program Analyst Staff, Office of Rulemaking, ARM–27, Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591, 1–888–551–1594. Internet users can find additional information on SBREFA in the Quick Jump section of the FAA's web page at http://www.faa.gov and may send electronic inquiries to the following Internet address: 9–AWA–SBREFA@faa.dot.gov.

Background

49 U.S.C. Subtitle IX, chapter 701—Commercial Space Launch Activities, formerly the Commercial Space Launch Act of 1984, as amended (CSLA), directs the Secretary of Transportation to establish insurance (or other financial responsibility) requirements in amounts sufficient to address certain risks associated with the conduct of licensed launch activities. In addition, the CSLA provides detailed requirements for allocating risk among the various launch participants, including U.S. Government agencies involved in launch services. Enacted in 1988, this comprehensive scheme was intended to facilitate development of the U.S. commercial launch industry by allowing it to compete effectively in the international marketplace and by providing to launch participants certain protections against the risk of catastrophic losses that could result from hazardous launch activities. The U.S. Government benefits from these provisions by limiting its own liability exposure including obligations that arise under international treaties. Additionally, a viable commercial launch industry contributes to the national interest of the United States.

The Secretary implements statutory-based financial responsibility and risk allocation requirements through the licensing and regulatory program carried out by the Federal Aviation Administration's Associate Administrator for Commercial Space Transportation (referred to herein as the FAA or agency). Under delegated authority, the agency licenses commercial space launches and the commercial operation of launch sites carried out within the United States or by U.S. citizens abroad. As directed by the CSLA, the agency exercises its licensing authority in a manner consistent with public health and safety, the safety of property, and U.S. national security and foreign policy interests. The CSLA is also intended to encourage and facilitate private sector launch activities through simplified licensing procedures and use of Government-developed space technology, and to enhance U.S. space transportation infrastructure with public and private involvement.

This rulemaking is vital to the agency's goal of creating a stable regulatory environment, with predictable costs and benefits, for the commercial launch industry. Through a clear enunciation of regulatory requirements for insurance and allocation of risk, the commercial launch industry will have the information and certainty it requires to make informed risk management decisions that affect relationships with customers and suppliers.

Notice of Proposed Rulemaking

The agency issued a notice of proposed rulemaking (NPRM) on July 25, 1996 (61 FR 38992), soliciting public comments on its proposal for implementing financial responsibility and allocation of risk requirements. The NPRM provided a 60-day comment period that closed on September 23, 1996. A technical corrections document was published on August 23, 1996 (61 FR 43814). In response to requests for an extension of time in which to submit comments, the agency reopened the comment period for an additional 60 days. The comment period closed again on December 2, 1996. (*See* Notice published October 2, 1996 (61 FR 51395).)

In the NPRM, the agency proposed to codify existing practices, except where otherwise indicated, and to standardize its approach to implementing the CSLA financial responsibility and allocation of risk regime in rules of general applicability.

Eight comments were submitted to the docket. Three comments were submitted by launch services providers currently licensed by the FAA to conduct commercial space launch activities. They are Lockheed Martin Corporation (Lockheed Martin), Orbital Sciences Corporation (Orbital Sciences) and McDonnell Douglas Corporation (McDonnell Douglas). Boeing Commercial Space Company commented on behalf of Sea Launch Limited Partnership (Sea Launch), an international joint venture not yet licensed by the FAA, and The Boeing Company (Boeing) commented separately. Since the close of the comment period in December 1996, The Boeing Company merged with McDonnell Douglas Corporation; however, McDonnell Douglas Corporation, operating as a wholly-owned subsidiary of The Boeing Company, remains responsible for providing commercial launch services for the Delta family of launch vehicles. In this document, comments submitted by McDonnell Douglas before the merger are identified as McDonnell Douglas comments for ease of reference and to distinguish them from Boeing's comments. Spaceport Florida Authority (Spaceport Florida) was a prospective commercial launch site operator at the time it submitted comments and has since obtained an FAA license. Hughes Electronics, a communications satellite manufacturer, and Intelsat, a public international organization that owns and operates a global telecommunications network for members and users, also submitted comments. The agency sought clarification of certain comments it received and the clarifications are reflected either in the discussion below or in the docket maintained by the FAA Rules Docket Clerk and available for public inspection.

Second Reopening of Comment Period and Request for Comments

Several events following the close of the comment period on December 2, 1996, resulted in an agency decision to reopen the rulemaking docket a second time in order to allow industry an additional opportunity to offer views on the content of the NPRM.

A Delta launch vehicle failure at Cape Canaveral Air Station (CCAS) during a Government launch on January 17, 1997, damaged real and personal property located at the facility. Although it was not an FAA-licensed launch, and therefore not subject to CSLA financial responsibility requirements, the failure led to heightened scrutiny of insurance certificates provided by launch licensees in demonstrating satisfaction of FAA license orders.

The ensuing dialogue between agency officials and industry representatives revealed a fundamental lack of understanding within the commercial launch services industry of agency requirements with respect to coverage for claims of Government employees and employees of Government contractors and subcontractors. Since 1989, the agency has intended for launch licensees to provide coverage for these claims as part of the liability coverage required under a license, and has determined the necessary amount of insurance accordingly. However, this requirement was not evident to launch licensees until the agency provided clarifying information, in writing, in late April and early May, 1997.

Shortly thereafter, the Commercial Space Transportation Advisory Committee (COMSTAC) adopted a resolution recommending that the FAA publish a supplemental notice of proposed rulemaking for additional industry comment before adopting a final rule. In lieu of accepting the COMSTAC recommendation, the agency deemed it appropriate to reopen the comment period on the outstanding NPRM in order to afford industry an additional opportunity to formally express views on the agency's approach to financial responsibility and risk allocation for licensed launch activities. Reopening the docket also provided to industry the first opportunity to comment on these matters with the benefit of the agency's proposed definition of the term, ''licensed launch activities,'' which appears in a Notice of Proposed Rulemaking on Commercial Space Transportation Licensing Regulations (Licensing Regulations), published March 19, 1997 (62 FR 13216). A Notice reopening the comment period for an additional 30 days was published in the **Federal Register** on July 3, 1997 (62 FR 36028). The Notice posed a number of questions regarding the appropriate scope of CSLA-based liability insurance requirements and requested specific comments on costs and benefits associated with the rulemaking; however, commenters were not limited to responding to those questions. Four additional comments were submitted to the docket. Lockheed Martin and Orbital Sciences supplemented their initial responses and Kistler Aerospace Corporation (Kistler) and Marsh & McLennan, an insurance brokerage, commented for the first time. (Both the initial and supplemental comments of Lockheed Martin and Orbital Sciences are referenced in this Supplementary Information and distinguished as appropriate.)

Upon consideration of all of the comments received, the agency has determined that issuance of a final rule is appropriate at this time in order to ensure that Government, as well as commercial, interests are adequately protected. Absent a clear understanding of how the risks that attend licensed launch activities are to be allocated and managed under the CSLA, all launch participants, including the U.S. Government, may unwittingly remain exposed to uncovered liabilities.

Costs and benefits of this final rule have been assessed by the agency and appear in the final Regulatory Evaluation available for public review in the docket.

General Comments

The three commenters currently licensed by the FAA to conduct launch activities, Lockheed Martin, Orbital Sciences and McDonnell Douglas, have been subject to the agency's case-by-case implementation of financial responsibility requirements since commencing commercial launch activities. Accordingly, they are each well-situated to assess the significance of the NPRM to their current business practices. Their comments indicate that in a number of instances the agency's existing practices, as explained in the NPRM, were not apparent to the commercial launch industry or their insurers, and in their view the NPRM reflects fundamental changes in the agency's approach.

Two commenters noted that the NPRM reflects a trend towards significant reallocation of risk from the Government to commercial launch services providers. Two launch licensees indicated that the NPRM would require extensive and difficult changes to existing long-term contractual arrangements between launch services providers, their customers and their contractors. Rather than facilitating the industry, the NPRM, if made final, would have damaging and adverse effects on the U.S. commercial launch industry, according to these commenters. Although the licensees agreed that rulemaking to clarify financial responsibility requirements would be useful to the industry, they believe that additional opportunities for input and submission of comments should be afforded to the industry before issuance of a final rule. Two licensees recommended that the FAA utilize the COMSTAC by tasking it to review and comment on a redrafted document

reflecting industry comments on the NPRM.

The agency has determined that it is appropriate and timely to issue a final rule. The FAA's decision follows years of dialogue between the agency and the commercial launch industry, a public meeting covering financial responsibility matters, and a total comment period of 150 days on the NPRM. The agency will not further delay this rulemaking proceeding on the basis of the comments received. However, the agency's existing regulations allow any interested person to petition for amendment or repeal of a regulation and this remedy remains available to members of the public who seek a change in these final rules, 14 CFR 404.3.

In its general comments, Lockheed Martin suggested that certain issues raised in the NPRM be segmented from this rulemaking and the subject of separate, more focused, rulemaking proceedings. The agency agrees generally with this comment and, as indicated below, has identified issues that may require more detailed regulatory treatment beyond the general requirements contained in this final rule.

McDonnell Douglas has suggested that additional discussions between the commercial launch industry, the agency and the Air Force would be useful before issuance of final rules in light of ongoing Air Force efforts to replace existing commercialization agreements with the Commercial Space Operations Support Agreement (CSOSA). The CSOSA would also address insurance requirements and allocation of risk between the Air Force and range users.

The agency has participated in discussions between the Air Force and the commercial launch services industry to ensure that financial responsibility and risk allocation requirements under the CSLA apply to range users conducting licensed launch activities. Financial responsibility for unlicensed activities would be addressed by the CSOSA. The pending rulemaking on Licensing Regulations will determine in final rules the point at which lines are drawn by the agency between unlicensed and licensed launch activities. Given that understanding, the agency does not see the need to tie issuance of these rules to execution of a CSOSA.

McDonnell Douglas further urged that any changes to current industry practice that would be effected by proceeding directly to a final rule should not apply to licensed launch activities conducted in connection with any launch contracts, including options, executed prior to issuance of the final rule. In clarifying remarks, McDonnell Douglas explained its concern that this rulemaking would affect its costs. Where a fixed price contract has been negotiated with a commercial customer there would be no opportunity to adjust the price or allocate those costs differently. Therefore, in fairness to the industry and to facilitate the smooth implementation of these requirements, contract negotiations already concluded should not be impacted by this rulemaking, according to the commenter.

The agency maintains that, for the most part, these final rules reflect longstanding agency practices and should not impose significant additional costs on the industry. A Regulatory Evaluation prepared as part of this rulemaking proceeding assesses its cost implications. As required, the agency has considered those costs, as well as benefits, to the public in determining to issue this final rule. A single effective date for imposition of a final rule is necessary to ensure a common understanding of CSLA-based financial responsibility and risk allocation requirements, and staggered effective dates would be unworkable and confusing to all launch participants. Accordingly, the FAA rejects the suggestion of deferring the rule's effective date.

Spaceport Florida provided general comments to the docket maintaining the view that the proposed rules do not apply to a licensed commercial launch site operator. The agency agrees that the NPRM proposes requirements applicable to licensed launch activities. Customers of a launch site operator that hold FAA launch licenses would be required to comply with the agency's financial responsibility requirements. In the agency's view, a licensed launch site operator would obtain the benefits and responsibilities of a contractor to the launch licensee as a provider of launch property and services. The recently concluded memorandum of agreement between the Department of Defense, National Aeronautics and Space Administration (NASA) and the FAA reflects this approach to risk allocation for licensed commercial launch site operators.

Spaceport Florida further noted that the import of the NPRM would be to add to the levels of insurance historically required of launch licensees. This would make launch activities conducted within the United States more expensive and would hurt the competitive posture of the U.S. commercial launch industry vis-a-vis its foreign competitors.

The agency disagrees with Spaceport Florida's supposition that insurance levels will increase if the proposed rules are made final. The maximum probable loss methodology as well as the agency's general approach to assessing risks to certain property and personnel, as described in the NPRM, are utilized currently by the agency in establishing required levels of insurance. Insurance requirements will not necessarily increase by virtue of this rulemaking.

Risk Allocation Under the 1988 Amendments

In developing this rulemaking, the agency's goal has been to carry out congressional intent and facilitate the competitive posture of the U.S. commercial launch industry through statutory-based risk sharing arrangements. However, in certain instances, the statutory language has left more questions unanswered than settled. For this reason, the agency sought industry views and clarification of the appropriate means of implementing particular provisions of the statute concerning liability insurance coverage and allocation of risks, including the requirement for inter-party waivers of claims.

This final rule represents the agency's position on how best to reconcile statutory requirements with the divergent views reflected in industry comments, taking into account the Government's limited acceptance of risk under the CSLA. In this discussion, the FAA has articulated its understanding of basic risk allocation principles of the 1988 Amendments (Pub. L. 100–657) and, in particular, the reciprocal waiver of claims provisions of 49 U.S.C. 70112(b) which lie at the heart of this rulemaking effort.

As outlined in the NPRM, two principal purposes of risk allocation under the 1988 Amendments to the CSLA are to limit the cost of managing launch risks by restricting litigation among launch participants and protect the commercial launch industry from the risk of catastrophic losses from third-party liability claims. The CSLA also insulates the U. S. Government from a significant measure of liability exposure at little or no cost to the Government. As explained in the NPRM, the Government faces liability exposure to third-party claims by virtue of its involvement in licensed launch activities through use of its property, personnel, facilities, equipment and services to support commercial launches and as a result of treaty obligations which impose strict liability on the United States for certain damage when the United States is a launching

state (Convention on International Liability for Damage Caused by Space Objects (Liability Convention), entered into force September 1972). The United States also bears international responsibility for national activities in outer space carried on by non-governmental entities which require authorization and continuing supervision by the appropriate State Party, according to Article VI of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (Outer Space Treaty), entered into force October 1967.

In order to ensure the comprehensive intent of the CSLA risk allocation scheme is fulfilled, the agency sought to identify all potential sources of claims against the various launch participants for injury, damage or loss and the financial resources that would be available to respond to those claims, either through insurance, self-insurance or congressional appropriations. Sources of claims can be separated into two broad groups: (1) those entities and individuals who are involved in licensed launch activities, and (2) those entities and individuals who are not involved in licensed launch activities. The agency then sought to identify potential targets of claims to ensure that their liability exposure would be addressed. These entities can also be classified into two groups: (1) the licensee, its customer, and the contractors and subcontractors of each involved in launch services, referred to collectively in this document as private party launch participants (PPLPs), and (2) the United States and its agencies, and their contractors and subcontractors, involved in licensed launch activities, referred to collectively herein as Government launch participants (GLPs). These categorizations are important because implementation of the benefits and responsibilities that flow from the CSLA risk allocation scheme depends upon how an entity is characterized. Traditionally, AST has utilized the classification of PPLPs and GLPs in license orders establishing financial responsibility requirements.

Absent the CSLA risk allocation scheme, each launch participant is vulnerable to claims from other launch participants for injury, damage or loss to property and personnel as well as persons having no involvement in launch activities. The CSLA alters relationships among launch participants in several ways.

First, the CSLA directs that each PPLP enter into a mutual or reciprocal waiver of claims whereby each launch participant agrees to waive claims it may have against the other launch participants for its own property damage or loss and further agrees to be responsible for property damage or loss it sustains as a result of licensed launch activities. When implemented properly, each of the entities participating in the launch should be effectively estopped or foreclosed from asserting claims for property damage or loss against the other launch participants, and each launch participant is relieved of the threat and cost of inter-party litigation as well as the need to obtain liability insurance covering its potential liability to other launch participants for property damage or loss for which it might otherwise be legally responsible. However, the waiver of claims agreement is not intended to replace contractual rights and remedies negotiated by the parties, such as the right to a replacement launch in the event of a failed launch attempt.

Example 1: Launch company A's contractor is negligent and damages satellite customer B's spacecraft. By executing the statutory waiver of claims agreement, B has waived its right to pursue a claim for damages against A and A's contractor based on the latter's negligent act.

Second, the CSLA further directs the Government to execute a similar waiver of claims agreement with PPLPs when the Government is involved in launch services by virtue of its property or personnel; however, the Government's acceptance of risk under the statutory waiver of claims agreement is more limited than that undertaken by PPLPs. For property damage, the Government's waiver is limited to claims in excess of the required amount of Government property insurance. The CSLA instructs the Department of Transportation (DOT) to enter into the agreement for, or on behalf of, the Government, executive agencies of the Government involved in launch services, and the Government's contractors and subcontractors involved in launch services, collectively referred to herein and in agency license orders as Government launch participants (GLPs). The agency views this provision as establishing for the Government's contractors and subcontractors involved in licensed launch activities third-party beneficiary rights in the waiver agreement between the DOT and PPLPs.

Example 2: Launch company A's vehicle is destroyed seconds after ignition and lift-off causing extensive damage to the Government-owned launch pad from which the launch took place. As a condition of A's license, the agency required that A obtain insurance covering damage to Government property at the launch site in the amount of $40 million, based upon the agency's determination of maximum probable loss. If the amount of damage to the launch pad is assessed at $60 million, the Government absorbs $20 million of loss to its property because it has waived claims for property damage in excess of the required amount of insurance.

Third, the CSLA provides that each signatory to a reciprocal waiver of claims agreement must also agree to be responsible for personal injury, property damage or loss sustained by its own employees resulting from licensed launch activities. Individuals employed by the various launch participants do not waive claims for their own property damage or loss or for personal injury suffered on the job under the CSLA reciprocal waiver of claims requirement. An employee who is injured or suffers loss in the course of employment as a result of licensed launch activities may recover workers compensation from his or her employer. Alternatively, that employee may elect to pursue his or her legal remedies against another launch participant whose negligence caused or contributed to the injury or loss. Ascertaining where financial responsibility lies under the CSLA for covering individual employee claims has proven to be one of the more controversial issues in this rulemaking.

The CSLA also alters traditional insurance practices with respect to third-party liability coverage. Under the CSLA, each launch participant involved in licensed launch activities is also an additional insured under the statutorily-mandated liability policy obtained by the launch licensee and is covered in the event of third-party claims, up to the required level of insurance. In this manner, entities participating in the launch are relieved of the need to obtain separate liability policies covering the shared risk of third-party liability. This approach of insuring all launch participants against third-party liability maximizes the capacity of the space launch insurance market to cover the risk of third-party claims.

Example 3: Launch company A's launch vehicle is destroyed mid-flight and debris impacts a nearby community. Community residents file suit naming both launch company A and its customer, satellite company B, as defendants and joint tortfeasors. Launch company A's liability policy must respond to cover both A's and B's liability, up to the limits of the policy established by the agency, unless a policy exclusion applies.

Finally, the CSLA provides a mechanism whereby the Government accepts the risk of third-party claims that exceed the limits of the liability insurance established by the agency, subject to approval of a compensation plan prepared by the agency and congressional appropriation of funds. This catastrophic risk protection is frequently referred to within the space transportation industry as ''indemnification'' although that term does not appear in the statute. In the previous example, if successful claims against A and B exceed the amount of insurance established by the FAA for A's launch, the FAA would prepare a compensation plan for the President to submit to Congress for an additional appropriation or other legislative authority, up to $1.5 billion (as adjusted for inflation occurring after January 1, 1989) above the amount of insurance established by the FAA. Above that amount, A and B would remain liable for judgments against them.

Identified earlier in this discussion, is the troublesome issue of determining how the CSLA is intended to address financial responsibility for employee losses and injuries. Defining the class of ''third parties'' whose claims would be covered by the statutorily-required liability policy has also been one of the more problematic issues associated with this rulemaking. The two issues are closely related, as explained below.

In this final rule, the FAA concludes that although all employees of the various entities involved in licensed launch activities meet the statutory definition of the term ''third party,'' the statutorily-mandated liability policy is not intended to respond to PPLP employee claims. Rather, the CSLA imposes on PPLPs financial responsibility for covering their employees' claims in a manner that is separate from the launch liability coverage a licensee must obtain. In essence, the agreement undertaken by each PPLP to be responsible for its employees' losses contractually obligates each PPLP to indemnify and hold the other launch participants harmless in the event of claims by one's own employees for injury, property damage or loss.

From the comments received and clarifications provided by licensees concerning their existing risk management programs, the agency understands that different methods are employed to provide the financial responsibility that covers this additional obligation. Some launch liability policies will respond to a contractual obligation assumed by an insured under the policy, including the obligation assumed under the reciprocal waiver of claims agreement to be responsible for one's own employees' losses. Alternatively, launch participants may rely on separate insurance, such as their comprehensive general liability policy, to respond to this obligation. Either way, the agency concludes that financial responsibility for PPLP employee losses is intended to be addressed, first, through employer-provided workers compensation coverage, and second, through contractual obligations undertaken by each PPLP through the reciprocal waiver of claims agreement in the event one's own employee claims against another launch participant for loss or injury.

A different approach is utilized for claims of GLP employees, referred to in the NPRM as Government personnel. Because of limitations under appropriations laws on the Government's ability to assume an unfunded contingent financial responsibility and the additional costs that would otherwise flow to the Government if additional risks were imposed on Government contractors and subcontractors, the Government does not accept the additional financial responsibility of indemnifying other launch participants in the event of GLP employee claims within the limits of the liability policy. Therefore, GLP employee claims against other launch participants must be covered by the licensee's launch liability policy, together with other third-party claims.

By removing from the statutorily-required liability coverage those claims that have the greatest probability of occurrence, that is, PPLP claims for property damage or loss and claims of PPLP employees for injury, property damage or loss, along with the attendant risks and costs that would accompany inter-party litigation in the event of such claims, the universe of risks covered by statutory-based insurance is significantly reduced. In this manner, the launch liability insurance market is able to cover all launch participants' potential liability to uninvolved persons and claims of GLP employees. The agency understands that insurance satisfying CSLA-based requirements is available at reasonable cost under current market conditions.

Detailed immediately below is a more complete discussion of the agency's initial proposal on risk allocation, specifically as it relates to coverage for employee losses, industry comments on the proposal and the agency's rationale for adopting this final rule. Comments on other substantive areas of the rulemaking are summarized and addressed following this discussion in the section-by-section analysis.

Notice of Proposed Rulemaking

Proposed Approach to Government Risk Allocation

Under the NPRM, financial risks associated with commercial launch activities would be allocated primarily to the commercial entities engaged in such activities. The only exceptions are for those financial risks expressly assigned to the Government by the CSLA. They are: (1) the risk otherwise borne by the U.S. commercial launch industry of catastrophic losses and unlimited liability associated with commercial launch activities, up to the statutory limit of $1.5 billion (as adjusted for inflation occurring after January 1, 1989) above required third-party liability insurance, subject to enactment of legislation, 49 U.S.C. 70113(a); (2) the risk of property damage or loss to U.S. Government launch property or facilities in excess of required insurance, 49 U.S.C. 70112(b)(2); and (3) acceptance of liability for death, bodily injury or property damage or loss that results from the willful misconduct of the United States or its agents, 49 U.S.C. 70112(e).

All other financial risks would be allocated under the NPRM to commercial entities engaged in the commercial launch business. Through reciprocal waiver of claims agreements, private party launch participants (PPLPs) would be required to accept responsibility for their own property damage or loss and for injury or loss sustained by their employees. Except for insurance required by the CSLA, the NPRM proposed to leave to the various launch participants the determination of how best to cover their resultant financial responsibilities.

Financial protection for the Government would be provided through required insurance and the reciprocal waiver of claims scheme. Insurance covering the Government's risk would be in the form of: (1) liability insurance that protects the Government from third-party liability, including liability imposed on the United States by virtue of treaty obligations; and (2) property insurance up to a prescribed amount that covers Government property, range assets and property of Government launch participants (GLPs), on or near a Federal range facility, that is exposed to risk of loss or damage as a result of licensed launch activities.

The CSLA reciprocal waiver of claims scheme would benefit the Government by freeing GLPs from the risk of claims

for property damage or loss by PPLPs. The Government would waive claims for property damage or loss occurring at a Federal range facility, on behalf of itself and GLPs, to the extent losses exceed the required amount of Government property insurance. The Government could also waive property damage claims, consistent with the CSLA, where a policy exclusion is deemed ''usual'' for the type of insurance involved. Unlike the additional financial responsibilities accepted by PPLPs for their employees' losses, the NPRM further explained that the Government does not accept this responsibility with respect to losses suffered by Government personnel, defined as employees of GLPs, because they would be deemed ''third parties'' whose claims must be addressed by the launch licensee's liability policy.

The NPRM proposed that Government contractors and subcontractors involved in launch services would be treated no differently than the United States for purposes of required insurance coverage and risk allocation. The rationale offered for the agency's approach was three-fold: (1) that contractors and subcontractors of the United States are third-party beneficiaries of the Government's waiver of claims agreement with the licensee, its customer, and their respective contractors and subcontractors, (2) to relieve the Government of certain costs and burdens that would otherwise flow to it in the event of damage to property of Government contractors and subcontractors, and (3) to avoid violation of the Anti-Deficiency Act which prohibits the Government from agreeing to assume an unfunded contingent liability absent specific statutory authority to do so.

The approach proposed to risk allocation for Government contractors and subcontractors was intended to facilitate commercial use of Federal range launch property and services. When a commercial user contracts with a Government agency for use of a Federal range facility, the commercial user also obtains the benefit of certain services provided by the Government through its contractors and subcontractors. Services include base operations support, equipment, maintenance and other ancillary activities that support Federal range operations. Although the Government has a means of accounting for contractor services utilized in support of commercial operations and is able to allocate direct costs to commercial users, the Government does not contract differently in terms of risk allocation depending upon whether the support or services provided are in support of commercial as opposed to government launches. Therefore, if Government contractors were confronted with additional risks of liability and financial responsibilities arising out of their support for commercial launch operations and had to obtain additional insurance to cover those risks, either the cost of the additional insurance would be charged to the Government as an allowable cost but one that is not recoverable from the commercial user or the contractor could refuse to assume the risk of additional liability and decline to do business with the Government or to support commercial operations.

To avoid these results, and to limit financial exposure of the Government, the agency has consistently treated Government contractors and subcontractors as though they stand in the Government's shoes for purposes of insurance and risk allocation. Accordingly, the NPRM proposed to continue the agency's longstanding practice of imposing on Government contractors and subcontractors only the limited obligation to waive claims and assume responsibility for employee losses in excess of required property and liability insurance, respectively, that the agency currently accepts when entering into a reciprocal waiver of claims agreement on behalf of the Government and its agencies involved in licensed launch activities. Thus, under the NPRM, and consistent with existing license orders, property belonging to Government contractors and subcontractors involved in launch services at a Federal range facility would be covered by the insurance provided for damage or loss to Government property, even if those entities maintain their own property insurance. Similarly, Government contractor and subcontractor employees would be accorded ''third party'' status whose claims would be addressed by the launch licensee's liability policy. In addition, Government personnel would be named as additional insureds under the launch licensee's liability policy and their potential liability to third parties would also be covered.

Proposed Risk Allocation for Employee Losses

(1) Definition of ''Third Party''

In the NPRM, the agency proposed a new definition of the term ''third party'' to facilitate understanding and implementation of the agency's approach to risk allocation for employee losses. The term ''third party'' is especially significant in this rulemaking because it is used to determine the universe of potential third-party claimants under the required liability insurance obtained by the licensee, determines eligibility for payment by the U.S. Government of excess third-party claims, and has implications bearing on the proper implementation of reciprocal waiver of claims agreements whereby launch participants assume responsibility for losses sustained by their own employees as a result of licensed launch activities. The definition of ''third party'' must be examined with each of these considerations in mind to ensure a fair allocation of risk as contemplated by the CSLA.

The statutory definition of ''third party'' is one of exclusion. It means ''a person except—(A) the United States Government or the Government's contractors or subcontractors involved in launch services; (B) a licensee or transferee under (49 U.S.C. Subtitle IX, ch. 701); (C) a licensee's or transferree's contractors, subcontractors, or customers involved in launch services; or (D) the customer's contractors or subcontractors involved in launch services. 49 U.S.C. 70102(11). Conspicuous by its absence from the statutory definition is any mention of employees of the various launch participant entities involved in launch services, including the Government. Therefore, employees of all entities involved in launch services may be considered ''third parties'' under the statutory definition because they are not excepted from the definition. In essence, the CSLA defines a third party as any person that is not directed by the statute to sign a reciprocal waiver of claims agreement.

Nevertheless, the definition of ''third party'' proposed in the NPRM explicitly included Government personnel, defined to include Government employees and employees of Government contractors and subcontractors involved in launch services for licensed launch activities, and excluded employees of private party launch participants (PPLPs). The definition, as proposed, differentiates between employees of PPLPs and those of Government launch participants (GLPs) because under the NPRM the former's claims are intended to be addressed through reciprocal waiver of claims agreements and the latter's are intended to be covered by the required liability policy. This distinction was justified as necessary (and intended by Congress) because, in the agency's view, financial responsibility for all claims of Government employees and employees of Government contractors and

subcontractors against other launch participants has not been assumed by the Government. Under the proposed definition, claims for damage or loss suffered by Government personnel against other launch participants would be covered up to the limits of the liability insurance required of a launch licensee. The Government would only be responsible for covering its employees' claims against other launch participants, as well as other third-party claims, if the liability policy would not respond because of a policy exclusion deemed usual for the type of insurance or if the policy limits were exhausted. Claims of employees of PPLPs would not be covered by the liability policy and would have to be addressed through some other means. Accordingly, the NPRM definition of the term ''third party'' nearly echoes the statutory definition, with the following proviso: ''Government personnel, as defined in this section (at 440.3(a)(6)) are third parties. For purposes of these regulations, employees of other launch participants identified in paragraphs (a)(15)(i) (B) and (C) of this section are not third parties.''

In practice, this definition is consistent with the agency's approach since 1989, to setting risk-based insurance requirements. That is, for all launch licenses issued to date, the amount of liability insurance required as a condition of each license takes into consideration the value of the maximum probable loss from claims by Government personnel for death, bodily injury, or property damage or loss. It does not account for potential claims of PPLP employees.

(2) Assumption of Responsibility for Employee Losses

The NPRM explained the assumption of responsibility for losses sustained by one's own employees as a mutual undertaking by each entity to ''cover'' losses of its own employees, and leaves to each launch participant the determination of how best to manage their resultant risk. As one possible approach, the agency offered that launch participants could maintain other liability insurance to cover the financial risk that arises out of this contractual obligation.

The Government is not able to assume an unfunded contractual liability under appropriations laws absent explicit statutory authority to do so, and the agency does not view the statute as providing the necessary authority except to the extent third-party claims may be the subject of an additional appropriation under the statutory payment of excess claims procedures presented in 49 U.S.C. 70113. Therefore, according Government employees the status of a ''third party'' ensures that financial resources will be available, through the licensee's liability policy, to cover Government employee claims against other launch participants and avoids the need for each launch participant to maintain insurance covering their potential liability for such claims. It also reconciles the statutory assumption of responsibility obligation with limitations on the Government's ability to assume an unfunded contingent liability except where Congress has clearly provided a mechanism for doing so and allowed the Government to accept this risk. For example, Public Law 85–804 authorizes certain agency heads to enter into contracts for national defense purposes which expressly provide that the United States will hold harmless and indemnify its contractors for third-party claims, loss or damage to contractor property and loss or damage to Government property, without regard to appropriations laws applicable to Government contracting. This authority is limited to claims or losses arising out of or resulting from unusually hazardous or nuclear risks.

To avoid passing additional costs to the Government, third-party status is also accorded to employees of Government contractors and subcontractors involved in launch services under current practice and this is the approach reflected in the NPRM.

In 1993, the agency revised the form of Agreement for Waiver of Claims and Assumption of Responsibility (Agreement) that accompanies each launch license to clarify that the Government waives claims and assumes responsibility for property damage it sustains and for any bodily injury or property damage sustained by its own employees only to the extent that those claims exceed the amount of property and liability insurance required under the CSLA. Under current practice, it is this limited waiver, release of claims and assumption of responsibility that the Government obligates itself to extend to its contractors and subcontractors under paragraph 4(c) of the Agreement now in use. In this regard, the FAA maintains that the approach to risk allocation set forth in the NPRM is, in practical effect, consistent with current practice. However, because Government employee claims would be regarded as third-party claims the agency proposed to remove reference to responsibility for losses sustained by Government employees from the proposed form of agreement presented in Appendix II of the NPRM. Additionally, because employees of Government contractors and subcontractors would also be deemed third parties, the Government would not be required to obligate its contractors and subcontractors to accept responsibility for their employees' losses and reference to this obligation was also omitted from the proposed form of agreement presented in Appendix II.

In summary, whereas PPLPs would waive claims against the other launch participants and agree to be responsible for their own property damage or loss and for losses sustained by their employees, the Government's waiver would be limited to property damage suffered by GLPs at the launch site, in excess of required property insurance. Claims of Government personnel would be covered by the required liability insurance up to the limits specified by the agency. Uncovered claims of Government personnel would be included in a compensation plan submitted to Congress as part of a request for appropriations to cover excess third-party claims.

Comments on the NPRM

The agency requested comments on the approach to risk allocation proposed in the NPRM in light of the following considerations: (1) absence of any indication in the CSLA or legislative history that employees of nongovernmental launch participants are intended to be included in the definition of ''third parties,'' whereas the legislative history explicitly indicates that Government employees are to be considered ''third parties,'' S. Rep. No. 100–593, 100th Cong., 2d Sess. 8 (1988); (2) absence of any indication that the Government would compensate the claims of employees of PPLPs as excess third-party claims; (3) considering employees of launch participants as third parties would run counter to the assumption of responsibility for their losses required by the statute; and (4) third-party liability insurance requirements would likely increase if employees of all launch participants are considered third parties.

Industry reaction to the NPRM and the agency's clarification of insurance requirements in the spring of 1997, following a Delta launch vehicle failure earlier in the year, led the agency to reopen the docket for an additional 30-day comment period. In doing so, the agency queried whether employee claims are intended to be addressed by the liability policy a launch licensee obtains to cover all launch participants' third-party liability. Alternatively, we

asked whether the reciprocal waiver of claims agreement in which launch participants agree to assume responsibility for losses sustained by their employees imposes additional financial responsibilities on the parties to cover these claims. More specifically, the Notice announcing the reopened docket requested answers to the following questions: ''Are employees of the Federal Government and its contractors and subcontractors (defined in the NPRM as ''Government personnel'') properly classified as third parties? If not, how should their claims against other launch participants for damage, injury, or loss be addressed, particularly in light of the limits on the Government's ability under appropriations laws to accede to unfunded contingent liability? From an insurance perspective, what issues or problems does the proposed definition present in providing liability insurance coverage for third-party claims? Should employees of all private party launch participants also be deemed third parties? If so, how would this affect CSLA-based liability coverage? If these employees are not third parties, how should their claims be managed? That is, how should the various launch participants protect themselves financially from claims by other launch participants' employees?'' (62 FR 36029, July 3, 1997).

The range of comments received and summarized below underscores the lack of clarity in the statute. In particular, industry opinion was divided on the appropriate definition of the term ''third party'' and the intent of the reciprocal waiver of claims requirement.

Both Boeing, commenting in September 1996, before its merger with McDonnell Douglas Corporation, and Sea Launch suggested that all employees of all launch participants should be viewed as ''third parties'' whose claims must be addressed by the required liability policy obtained by the licensee.

In support of its position, Boeing stated that the intent of the CSLA is to provide to all launch participants protection against claims by those who suffer injury as a result of an errant launch—either through statutorily-required liability insurance or through the inter-party waivers required by the CSLA. Because employees are not required to enter into waiver of claims agreements their individual claims against the other launch participants are not waived. Yet, according to Boeing, if employees are not accorded third-party status their claims may not be covered by the required third-party liability insurance nor would they be eligible for payment by the Government as part of the catastrophic loss protection contemplated by the CSLA. (Boeing erroneously refers to umbrella insurance coverage provided by the U.S. Government to cover excess third-party claims. The Government does not maintain insurance to cover catastrophic losses resulting from licensed launch activities. Rather, the CSLA provides a procedure whereby Congress may vote to appropriate funds to cover those losses.) According to Boeing, this is an ironic result because launch participant employees are the most likely to be injured in the event of a launch accident. Moreover, absent liability insurance coverage for employee claims, launch participants would be vulnerable to, and potentially liable for, claims from launch participant employees and there is no clear statutory basis for suggesting that launch participants must indemnify each other for those claims. Finally, according to Boeing, there is no basis for treating Government employees differently from all other employees in light of the statutory definition of ''third party'' which omits any reference to employees of any entity involved in launch services, and therefore all employees should be considered ''third parties.''

Boeing also refuted any suggestion that the assumption of responsibility provisions of the CSLA and reciprocal waiver of claims agreement imposes a requirement on a party to indemnify another launch participant for successful claims by that party's own employee. Without offering an opinion as to the meaning of the assumption of responsibility provision of the statute, Boeing argued that if Congress had intended for there to be an indemnification obligation it would have done so explicitly and the term ''indemnification'' does not appear in the CSLA. The comment cites a legal encyclopedia in support of the argument that a party claiming a right to be indemnified against its own negligence must establish that a contract clearly expresses such an intention and notes further that such agreements have been held void as against public policy. The better view, according to the comment, is that all employees, government and nongovernment, should be considered third parties.

Sea Launch commented that all employees of the various launch participants should be considered ''third parties,'' based on the statutory definition, whose claims would be covered by the required liability insurance and then by the Government under the excess claims provision of the statute. Sea Launch echoed many of the concerns expressed by Boeing in noting that unless considered ''third parties,'' injured employees would be unable to recover for their losses in the event the negligent party did not maintain adequate coverage for the claim.

Sea Launch also suggested that if employee claims are not eligible for payment by the Government as excess third-party claims because they are covered by their employer's assumption of responsibility, then the same reasoning should apply to claims of Government personnel. In Sea Launch's view, it is reasonable to expect the Government to cover excess claims of Government personnel as third party claims and the same eligibility should apply to claims of all employees. Finally, Sea Launch disagreed that covering all employees' claims as third-party claims would significantly increase the amount of required insurance because a responsible launch licensee would obtain such coverage in any event, whether or not required by regulation.

Like Boeing, Sea Launch also did not offer a definitive view on the intended meaning of the reciprocal waiver of claims provisions of the statute; however, it postulated that if the assumption of responsibility is an agreement to indemnify other parties for claims brought by one's own employees then that obligation should be backed by financial resources, such as the liability coverage obtained by the licensee, in order to effectuate the intent of the CSLA. In clarifying remarks, Sea Launch indicated that the statutory-based assumption of responsibility is intended to be an affirmative obligation to indemnify other launch participants in the event one's own employee, a third party, claims against another participant, and the licensee's liability policy provides the financial resources covering this obligation. In other words, the liability policy effectively provides a financial guaranty that each launch participant will fulfill its contractual obligation to other launch participants to be responsible for its employees' losses. Whether the basis for the claim is viewed as the contractual obligation to indemnify another party, or as a third-party claim, the policy should respond, according to Sea Launch, because ultimately it is the employee/third party that must be compensated for his or her loss. As between a launch participant and its contractor, Sea Launch commented that it would be a contractual matter that would be negotiated by the parties outside of the CSLA.

Kistler offered the view that all employees should be considered third parties otherwise employees of PPLPs would be limited to workers compensation while Government personnel would benefit from more extensive recoveries. The substance of this comment has already been addressed in the preceding summary of the 1988 Amendments; however, the agency reiterates here that no employees are required to waive their claims under the reciprocal waiver of claims agreement and that any injured employee may elect to pursue legal remedies against a negligent launch participant other than his or her employer.

Lockheed Martin, Orbital Sciences and McDonnell Douglas put forward a contrasting view of the intended coverage of the term ''third party.'' According to these three launch licensees, no employees should be considered ''third parties'' for purposes of the required liability insurance coverage. Under their view, the assumption of responsibility for employee losses requires that each signatory to the reciprocal agreement indemnify the other signatories for claims made by one's own employees.

McDonnell Douglas and Orbital Sciences specifically commented that personnel are part of the entity of which they are members and therefore no personnel, not even Government personnel, should be considered ''third parties'' for purposes of required liability insurance coverage. According to McDonnell Douglas and Orbital Sciences, an employee's claims are the responsibility of his or her employer, including the U.S. Government and its contractors. Under the inter-party waiver agreement, that responsibility includes a requirement to indemnify other signatories to the agreement in the event of claims by one's own employee against the other signatories.

As a result of the Boeing-McDonnell Douglas merger, effective August 1, 1997, the risk management program for commercial launches of the Delta family of launch vehicles was consolidated within Boeing. Because of the divergence of views expressed in docket submissions by McDonnell Douglas and Boeing prior to the merger, the agency sought clarification from Boeing's Insurance Department, Space and Liability Risks, as to Boeing's views of appropriate implementation of risk allocation under the CSLA. By way of clarification, Boeing's insurance manager endorsed the view espoused by McDonnell Douglas in its written comments that financial responsibility for one's own employees' losses is intended to be addressed by the reciprocal waiver of claims agreement undertaken by each launch participant and not by the liability policy provided by the launch licensee. By implication, no employees would be deemed ''third parties'' in the sense that their claims would not be covered by the required liability policy. Rather, each signatory to a reciprocal waiver of claims agreement is responsible for maintaining insurance that responds to its contractual obligation to indemnify other launch participants in the event of an employee claim for injury, damage or loss.

Orbital Sciences' insurance broker clarified its comment further by stating that allowing a launch participant's employee to recover as a third party against another launch participant would defeat the intent of the reciprocal waiver of claims provisions of the statute to limit inter-party claims. Also, allowing additional insureds (both the entity and its employees) to also be claimants under the same policy could be done at a cost; however, this approach flies in the face of the CSLA, according to the comment.

Orbital Sciences' insurance broker further stated that at the time the 1988 Amendments were enacted, it had been understood that special consideration was warranted for Government employees because of limitations on the Government's ability to assume an unfunded contingent liability to cover successful claims of Government employees against other launch participants. However, the same treatment was not believed to be appropriate for employees of Government contractors because those entities can obtain insurance to cover this responsibility.

Orbital Sciences reaffirmed its position in supplemental comments to the docket noting further that its launch insurance did not cover claims of Government personnel and that doing so could double the cost of insurance. Orbital Sciences also made the following additional points: First, Government personnel are not now and ought not be classified as ''third parties.'' Second, each signatory to the reciprocal waiver of claims agreement, including the Government, agrees to indemnify the other signatories for claims made by its own employees resulting from licensed launch activities. Third, the agency's views, as expressed in the NPRM and in correspondence with the industry, represent an inappropriate, unnecessary and unwarranted expansion of industry's liability burden, as well as a shift of liability from the Government to the industry. Fourth, the statutory limitation on the Government's waiver of property damage has no bearing on and does not in any way limit its assumption of responsibility for employee losses. Fifth, limitations on the Government's ability to accede to unfunded contingent liability should not impede the Government's ability to assume responsibility for its employees' losses and should be handled in a manner similar to the excess claims provisions of the CSLA. Sixth, the notion of reasonable cost of insurance is a relative term and in any event allowing inter-party claims instead of relying upon the reciprocal waiver regime defeats a fundamental goal of the CSLA. Seventh, allowing Government personnel to be claimants and insureds under the same policy is unorthodox and renders the reciprocal waiver scheme useless. Eighth, under the agency's proposal the licensee's loss record would be unfairly impacted because its liability policy would have to respond to claims caused by a grossly negligent launch participant, defeating the ''immunity'' from such claims that the reciprocal waiver scheme would otherwise provide. According to Orbital Sciences, this is particularly problematic where the Government's contractor is involved because the licensee has no direct control over that entity or its employees.

In further clarification of its remarks, OSC's broker explained that a licensee's liability policy can be written so as to respond to the liability assumed by an insured under a contract or agreement, including the contractual obligation each launch participant assumes under the reciprocal waiver of claims agreement to be responsible for its employees' losses. This approach fulfills the important objective that underlies the reciprocal agreement to be responsible for employees' losses of keeping litigation costs to a minimum.

Lockheed Martin's initial comments also expressed concern over the inclusion of Government personnel as ''third parties,'' noting that including them would have far-reaching effects on the statutory risk allocation scheme, including the maximum probable loss determination for third-party losses, the nature and scope of required liability coverage, coverage for employee claims, scope of the reciprocal waivers of claims, and the U.S. Government's payment of excess third-party claims. Lockheed Martin noted that the statutory definition of ''third party'' does not differentiate between employees of the Government or its contractors and subcontractors and employees of private party launch participants (PPLPs). Lockheed Martin

also questioned the resultant lack of responsibility on the part of the Government for its employees' claims under the definition of ''third party'' proposed in the NPRM. Lockheed Martin initially suggested that it might be beneficial to consider all launch participant employees as ''third parties,'' but noted that this action should not be taken without understanding the consequences, such as higher insurance requirements for third-party liability. Lockheed Martin also stressed the importance of understanding how the agency interprets the reciprocal agreement between launch participants in which parties agree to be responsible for injury or losses sustained by their own employees.

In supplemental comments to the docket, Lockheed Martin unequivocally objected to defining the term ''third party'' to include any employees, whether Government-related or private party, and opposed any interpretation of the term ''third party'' that would relieve the Government of responsibility for its employees' losses and those of Government contractor employees under the reciprocal waiver of claims scheme of the CSLA. Lockheed Martin further stressed that although it has accommodated the Government's clarification that employees of the Government and its contractors and subcontractors are to be considered third parties, this was viewed by Lockheed Martin and its insurers as a new interpretation that transfers additional risk to the launch liability policy and could have significant adverse impacts on the licensee's loss exposure and premiums.

Lockheed Martin believes that the assumption of responsibility for employee losses imposes on each signatory to the interparty waiver agreement an obligation to indemnify another signatory/launch participant for the amount recovered by one's own employee for losses suffered as a result of licensed launch activities. According to Lockheed Martin, insurance that is separate and apart from the licensee's launch liability policy is available to cover this contractual obligation. In this manner, risk exposures and premium costs are more fairly distributed among launch participants without overburdening or distorting the licensee's actual loss record. Further expanding the definition of ''third party'' to include employees of Government contractors and other launch participants would effectively negate the inter-party waiver of claims scheme and leave Lockheed Martin financially responsible for all such losses, resulting in premium increases as high as $500,000 per launch, according to Lockheed Martin's supplemental comments.

Lockheed Martin incorporated by reference comments submitted by Marsh & McLennan, now J&H Marsh & McLennan, an aerospace insurance broker. According to Marsh & McLennan, insurance underwriters have long understood that Government employee claims and claims of Government contractor employees remained the responsibility of the Government or its contractors, respectively, as evidenced by the waiver of claims agreement. While the insurance market can respond to the Government's requirement that its employees be covered as third party claimants, inclusion of Government contractor employees is more problematic from an allocation of risk equity standpoint as it could significantly affect the cost of insurance, according to the comment. This view is consistent with that expressed to the agency by an insurance underwriter who added that requiring coverage for Government contractor employees could adversely affect launch services providers' ability to obtain insurance in the future at reasonable rates because their loss records would reflect claims for which they were not responsible.

To sum up, opponents of the proposed definition of ''third party'' argue that the additional coverage that would be required to comply with regulatory requirements would result in higher risk exposures and insurance premiums, that doing so is contrary to or would defeat the purpose of the reciprocal waiver scheme required by statute, and would lead to difficulties in implementation in that Government launch participant (GLP) employees would be both additional insureds protected from third party liability claims, as well as potential claimants, in effect making claims against their own liability policy. It could also allow a negligent employee to recover against another negligent launch participant, neither of whom is under the licensee's control or direction. This would unfairly impact the licensee's loss record—assuming the insurance market is able to respond to the additional risk.

Final Rule Approach to Risk Allocation for Employee Losses

Having summarized the range of views expressed, the agency resolves, as a matter of regulation, two issues that are critical to defining appropriate risk allocation and financial responsibility under the CSLA. First, the agency concludes that the reciprocal waiver of claims agreement in which launch participants assume responsibility for their employees' losses is intended to address financial responsibility for losses sustained by private party launch participant (PPLP) employees and remove the risk of such claims from the launch liability insurance coverage required under the CSLA. Second, although the agency agrees with those commenters who stated that the liability policy obtained by the launch licensee is not intended to cover PPLP employee claims because they are addressed through the reciprocal waiver of claims agreement, the agency further concludes that the launch licensee's liability policy is required to cover Government launch participant (GLP) employee claims up to the limits established by the agency in license orders. In resolving these issues, the agency maintains the distinction described in the NPRM between PPLPs and GLPs.

This final rule focuses primarily on risk allocation among private party launch participants (PPLPs) involved in licensed launch activities and between PPLPs and Government launch participants (GLPs) when the Government performs its traditional role as manager of the Federal launch ranges and provider of range safety services. The NPRM separately addressed the situation in which a Government agency is a customer of commercial launch services. The NPRM stated the FAA's view that because Government agencies cannot agree to an unfunded contingent liability absent express statutory authority to do so, employees of Government agency customers are also considered third parties whose claims would be covered by the licensee's launch liability policy. However, as explained in the NPRM, a Government-owned payload is not covered by statutorily-required Government property insurance and the U.S. Government agency customer accepts responsibility for property damage to the payload. This approach reflects current agency practice in establishing risk-based financial responsibility requirements for third-party liability and Government property damage. That said, the final rule does not resolve, as a matter of regulation, the form of reciprocal waiver of claims agreement the Government will utilize when a Government agency is involved in launch services as a customer and such agreements will continue to be addressed on an individual basis.

(1) Assumption of Responsibility for Employee Losses

This rulemaking requires that the agency clarify proper implementation of

the statutory language appearing in 49 U.S.C. 70112(b)(1) and (2) which provides that ''each party to the waiver *agrees to be responsible* for property damage or loss it sustains, or for personal injury to, death of, or property damage or loss sustained by its own employees resulting from an activity carried out under the license.'' (Emphasis added.) As one commenter queried, is it a restatement or elaboration of the requirement to provide a waiver? Is it a restatement of a requirement that a party would have even in the absence of the statute? Is it an affirmative obligation to indemnify other parties for claims brought against them by one's own employees?

One possible interpretation of the provision is that the agreement to be responsible for one's own employees' losses means compliance with workers compensation insurance requirements, a requirement an employer would have regardless of the CSLA. Ensuring workers compensation coverage is provided for employee claims reduces the likelihood that an injured employee will pursue claims against another launch participant but does not preclude this possibility. Because workers compensation laws are left to the states, and significant differences are found among the various state programs, the agency concludes that a federal statute is not required, or even appropriate, to ensure compliance with state law and the FAA therefore views this as an unlikely interpretation. That is, the statutory provision for assumption of responsibility is intended to have significance beyond a requirement already imposed on employers by most (49) states to provide workers compensation insurance coverage for their employees under existing state laws.

Another possibility is that by enacting this provision Congress intended to affect certain workers compensation schemes by removing any rights of subrogation that an employer's workers compensation insurance carrier may have under state law. This is also not likely, particularly for PPLPs whose workers compensation insurance carriers are not signatories to the reciprocal waiver of claims agreement. State workers compensation programs vary widely in terms of subrogation rights and it is not likely that Congress intended to interfere directly in their implementation.

It is conceivable that Congress intended for the Secretary of Transportation to waive subrogated claims of Federal agencies under the Federal Employee Compensation Act (FECA), but doing so would still not affect the rights of Government employees to independently pursue claims against other launch participants because their claims are not waived under the reciprocal waiver of claims agreement. However, it is possible that fewer claims by Government employees against other launch participants would be brought if Government agencies' subrogated rights were waived.

Simply put, FECA is the Federal Government's workers compensation program. Under FECA, a Federal employee is compensated for work-related injuries and if the injury was caused by a negligent third party, the employee is advised to pursue a claim against that negligent party. If the employee is successful in his claim, he or she is required to reimburse the Government the amount paid to the employee by the Government, with certain adjustments for legal fees and other expenses. Even if the CSLA means that the Government must forego its right to recover, it does not mean that Government employees forego their rights as injured claimants to proceed against a negligent launch participant.

The presence or absence of workers compensation coverage does not eliminate inter-party litigation, a primary objective of the CSLA risk allocation scheme. Workers compensation provides to an employee an exclusive remedy against his or her employer for injuries arising out of and suffered in the course of employment. However, an injured employee may elect to sue a launch participant other than his or her employer for negligently causing the injury. Generally, a majority of jurisdictions would deny to that negligent launch participant the right to seek contribution from the employer because the workers compensation remedy is exclusive to the employer. Yet, contribution may be possible under a substantive indemnity law or on the basis of an indemnity agreement or if an independent duty is owed by the employer to the negligent launch participant. In that event, the negligent launch participant may proceed against the employer by maintaining that a contractual agreement removes the bar that would otherwise prevent the negligent launch participant from seeking contribution from the employer. Even so, variations in state workers compensation programs may result in a host of issues still being litigated.

Therefore, in the interest of avoiding costly inter-party litigation, the agency concludes that Congress intended to create an indemnity obligation making each PPLP financially responsible, by contract, for its employees' claims or otherwise establishing an independent duty owed by each employer to the other launch participants. This responsibility may be termed a legislatively-mandated contractual indemnification obligation.

As between a launch participant and its contractors and subcontractors, the assumption of responsibility could be viewed as a ''contractor-under'' requirement whereby each party provides workers compensation insurance that would cover its contractors and subcontractors employees' claims in the event its contractors and subcontractors failed to provide coverage. Doing so would minimize the likelihood that an injured employee of a contractor would look to another launch participant's deep pockets for recourse. (Generally speaking, state law provisions of this nature are intended to give a general contractor an incentive to require subcontractors to carry workers compensation insurance. 2A Larson, Workers Compensation Law, 72.31(b).) However, the FAA declines to interfere with variations in state workers compensation programs and concludes that it is unnecessary to do so as long as we regard the assumption of responsibility to be a contractual indemnification obligation of each PPLP to the other launch participants to assume financial responsibility for its own employees' losses.

That said, the agency does not agree with the commenters that a comparable obligation is accepted by the Government through the reciprocal waiver of claims agreement. Whereas each PPLP undertakes a contractual obligation to indemnify other launch participants from claims of its own employees through the inter-party waiver agreement, the Government is unable to accept this contractual obligation absent express authority to do so because it would amount to an unfunded contingent contractual liability which is prohibited by appropriations laws. The agency does not believe that the statute authorizes the Government to undertake an additional unfunded obligation *except* if a policy exclusion is deemed ''usual'' or the available limits of the policy are exhausted. In either of those events, the Government would be responsible under the CSLA for covering those claims, subject to Congress appropriating funds for that purpose.

Moreover, the CSLA authorizes the Secretary of Transportation to establish financial responsibility requirements, consistent with the CSLA, to protect the Government, its agencies, and personnel from liability, death, bodily injury, or property damage or loss as a result of a

launch or operation of a launch site involving a facility or personnel of the Government. 49 U.S.C. 70112(e). The appropriate way to reconcile this provision with the Government's assumption of responsibility obligations in 49 U.S.C. 70112(b)(2) is to conclude that the Government accepts responsibility for its employees' losses but, as in the Government's waiver for property damage, *only* to the extent that they exceed required insurance or other demonstration of financial responsibility.

The Government's limited agreement to be responsible for losses sustained by its employees, as reflected in the final rule, is consistent with similar requirements imposed by the Air Force in existing commercialization agreements to hold the Government harmless from third-party liability, including losses suffered by members of the Armed Forces. Regardless of whether or not an FAA license is issued for a commercial activity, the Government is not willing to accept additional financial responsibility for its employees' losses, other than that imposed under FECA or other comparable Federal compensation program, when Government personnel are involved in supporting commercial launch activities and this is the view that is reflected in the CSLA at 49 U.S.C. 70112(e). Absent further clarification from Congress, the agency is unwilling to place on the Government responsibility for covering the liability of other parties whose negligence causes injury, damage or loss to Government employees involved in commercial launch services. Moreover, the Government is foreclosed from insuring this risk under appropriations laws and therefore it is both necessary and appropriate that claims of Government employees against the other launch participants be addressed by the licensee's liability policy.

This approach to covering claims of Government employees results from the agency's understanding of statutory objectives and the practical consequences of appropriations laws, as well as the practicalities of seeking recovery from the Government. The same approach is not necessary to address the claims of employees of PPLPs. Therefore, with respect to PPLPs, the agency adopts the view, expressed by the majority of commenters, that the agreement to be responsible for losses sustained by one's own employees establishes a contractual, substantive right in each signatory to the reciprocal agreement to be indemnified and held harmless from claims of the other signatories' employees. Commenters offering this understanding of the reciprocal waiver of claims agreement also stated that insurance, separate from launch liability insurance, can be obtained by each signatory to the agreement to cover this contractual obligation.

As a practical matter, the agency's determination that the Government assumes a limited acceptance of responsibility for its employees' losses should not impose an unreasonable burden on the commercial launch industry. Even if the Government assumed responsibility for losses sustained by Government personnel, a prudent PPLP would maintain insurance to cover its liability in the event Congress failed to appropriate funds for this obligation. Rather than risk an uncovered liability, we believe it should be preferable for all entities involved in launch services to ensure adequate resources exist to cover claims of Government employees through the liability policy obtained by the licensee in accordance with the CSLA.

The issue remains as to whether the agency's approach of addressing claims of Government employees is appropriate for employees of the Government's contractors and subcontractors involved in launch services. Although Government contractors and subcontractors are private entities not subject to the restrictions of appropriations laws, the agency maintains that it is appropriate to accord to those employees the same status as Government employees for this limited risk management purpose and require that the licensee's liability policy respond to claims of Government personnel. The waiver requirement set forth in the statute provides that the Government waives claims ''for'' or ''on behalf of'' its contractors involved in launch services. In doing so, the Government takes on additional responsibilities to safeguard the interests and rights of those entities that perform launch services, at the behest of the Government, in support of commercial operations. For this reason, Government contractors and subcontractors should not be required to accept additional liability or insurance obligations when they perform services in support of commercial launch operations under contract to the Government. Although Government contractors and subcontractors could obtain insurance to cover a contractual indemnification obligation, they are not currently required to do so. Thus, costs incurred in obtaining this additional coverage would likely be passed through to the Government as allowable and allocable costs. Rather than incur additional costs or risks, the agency has determined to maintain its current practice of requiring that the liability policy obtained by the licensee under the CSLA respond to claims of Government contractor and subcontractor employees.

The agency's interpretation of the statutory agreement in which parties agree to be responsible for losses of their own employees may be controversial in that it effectively relieves a party of the financial consequences of its own negligence. At first blush, this might seem an illogical result, or one that flies in the face of public policy; however, it is consistent generally with the no-fault, no-subrogation reciprocal waiver scheme required by the CSLA. Parties may validly contract for or require indemnification against their own future negligent acts as long as it is clearly done, as in the revised form of reciprocal waiver of claims agreement presented in Appendix II of the final rule. However, it would be contrary to public policy to allow a party to contract for indemnification against willful misconduct and the ''Agreement for Waiver of Claims and Assumption of Responsibility'' contained in Appendix II of the final rule does not allow a launch participant to be relieved of liability for such behavior. The agency anticipates that the commercial market will respond to these requirements by ensuring that only responsible launch participants will be employed to perform hazardous operations in order to reduce each participant's risk of financial responsibility for employee losses.

(2) Liability Insurance Coverage for Third Parties

In making the determinations reflected in the final rule, the FAA also considered the question of whether the liability policy a launch licensee obtains ought to respond, in the first instance, to all employee claims. The approach suggested by Boeing and Sea Launch of considering all employees to be third parties whose claims must be covered by the licensee's liability policy under the CSLA is attractive for several reasons. It ensures sufficient financial resources will be available to cover employee claims through the liability policy and as follows: In the event an employee's claims are not compensated by that policy, either because of an insurance exclusion deemed ''usual'' within the meaning of the statute or exhaustion of policy limits, the Government may elect to cover the claim under the procedures set forth in 49 U.S.C. 70113. If the Government fails to do so, then the launch participant/

employer's agreement to be responsible for the claim could be invoked and the sued launch participant would seek indemnification from the launch participant/employer for the amount of the employee's recovery. This approach offers the benefit of reconciling the view that employees of all launch participants may be third parties without stripping the CSLA-mandated agreement to be responsible for employee losses of substantive import. However, where the uncovered claim belongs to Government personnel, the agency would need to resolve whether the Government's agreement to be responsible for its employees' losses would be subject to 49 U.S.C. 70113 procedures or absolute.

In evaluating the issue, the agency considered the additional burdens that would be imposed upon launch licensees if all employees were deemed third parties whose claims would be addressed by the launch licensee's liability policy. To do so, the agency surveyed Air Force installations at which launches take place to ascertain the maximum number of employees, other than Government personnel (because their exposure is currently assessed by the agency in setting insurance requirements), that may be exposed to hazardous operations. Using $3 million as the value of life, the amount currently used by the agency in making maximum probable loss (MPL) determinations, and applying a conservative assumption that half the personnel exposed would suffer casualties within MPL thresholds, the agency determined that liability insurance levels would increase anywhere from $12–15 million to $54 million depending upon the launch vehicle and the Federal installation from which it is launched.

Although these increases in loss limits do not seem extraordinary in light of the statutory ceiling on required liability insurance of $500 million, the agency understands that directing additional coverage for claims of all launch participant employees would shift the risk of such claims to the liability policy and increase its cost, assuming insurance of this nature could be obtained. The agency considered whether the imposition of additional costs and risks on the launch industry that would be associated with this approach is warranted and justified in light of statutory objectives. Accordingly, the agency re-examined closely the intent of the 1988 Amendments in light of liability concerns confronting the commercial launch industry at the time the 1988 Amendments were enacted.

Extensive hearings on H.R. 3765, a predecessor to the 1988 Amendments, before the Subcommittee on Space Science and Applications on February 16–17, 1988, are illuminating in this regard. The various panelists presenting views at the hearings, as well as the Subcommittee Members, made clear in their remarks that it was the risk of catastrophic failures and potentially unlimited liability to persons completely unassociated with launch activities that was at the heart of the industry's concern in operating in a commercial manner at a time when insurance capacity was extremely limited.

The testimony suggests that third party liability risks at issue were risks to the public, that is, the uninvolved, unassociated innocent bystander having nothing to do with the launch activity, not employees of launch participants who would at least have some remedy under workers compensation statutes. In questioning Richard E. Brackeen, president of Martin Marietta Commercial Titan, Inc., Congressman Jack Buechner, R. Mo., asked about the history of claims for loss or injury of persons who were not involved in activities at the launch site. In his question, he carved out catastrophic losses to astronauts and the Challenger disaster, as well as workers compensation claims. ''I'm talking about people outside of the immediate launch system. I mean, it seems to me that as we get into these questions of indemnification, we're talking about a risk analyses [sic] that has to be done.'' *H.R. 3765, The Commercial Space Launch Act Amendments: Hearings Before the Subcommittee on Space Science and Applications of the House Comm. on Science, Space, and Technology*, 100th Cong., 2d Sess. 210 (1988).

In passing the 1988 Amendments, Congress determined that financial resources had to be available to cover claims by the public in the event a launch accident caused injury or damage to uninvolved persons. These resources would also satisfy the obligations of the United States under the Outer Space Treaties in the event of damage caused by a launch from the United States to a foreign territory. Earlier testimony suggests reason to believe that claims between the launch participants, including their employees, were regarded as first and second party claims that would be addressed through reciprocal waiver agreements, and not as third-party claims. In this manner, and in combination with the waiver by launch participants of first party damage or loss, the highest risk claims would be removed from liability coverage at a time when insurance capacity was extremely limited. This is consistent with the views expressed in this rulemaking by some commenters and their insurance brokers that employees are considered part of their employing entity whose claims were intended to be addressed through reciprocal waiver of claims agreements and separately from the third-party claims of uninvolved persons.

The legislative history points to a unique conclusion with respect to Government employees, however. As reported out of the House Committee on Science, Space and Technology, the definition of ''third party'' in H.R. 4399 included United States personnel involved in launch services as part of the definition thereby excluding them from ''third party'' status. The Senate Report accompanying the 1988 Amendments indicates generally that the definition of the term ''third party'' is ''intended to be any person not associated directly with commercial launch operations.'' S. Rep. No. 100–593, 100 Cong., 2d Sess. at p. 8 (1988). Yet, the report language expressly reserves third party status for Government personnel directly associated with commercial launch operations and reference to Government personnel was removed from the definition of ''third party'' in the bill. Public Law 100–657, known as the ''Commercial Space Launch Act Amendments of 1988'' also makes no reference to Government personnel in the definition of ''third party.'' Thus, the FAA concludes that a deliberate decision was made to reclassify Government employees as third parties. Despite the lack of clarity in the statutory definition, ample basis exists to include Government employees in the universe of potential third-party claimants.

The agency has also been advised by aerospace insurance brokers that the special circumstances of Government appropriations law was understood within the insurance community at the time the 1988 Amendments were enacted and that accommodation for covering Government employee claims could be made. This is accomplished by ensuring that Government employees are regarded as third parties for purposes of ensuring that the launch licensee's liability policy will respond to their claims for injury, damage or loss.

The agency does not find the same indications that the launch licensee's liability policy was intended to respond to claims of employees of PPLPs involved in a launch. Even if these

employees are ''third parties'' within the statutory definition of the term, the agency concludes that the mandatory agreement by each PPLP to be responsible for its employees' losses is a substantive requirement which supersedes the need to address their claims through the required liability policy. According to the insurance community, this interpretation is consistent with the universe of risks underwriters have agreed to accept by insuring launch liability. The agency is advised that underwriters have agreed to provide coverage for an unorthodox breadth of risks, as required by the CSLA—a single liability policy covering all launch participants as additional insureds—with the understanding that the claims having the highest risk of occurrence (claims for injury by individuals involved in licensed launch activities) would be addressed through other means, specifically, the waiver of claims and assumption of responsibility obligations of the CSLA. It is unclear whether the launch insurance market could or would respond to the imposition of additional risks from PPLP employee claims. Including coverage for GLP employee claims has been accommodated, but evidently not without some resistance. The agency does not find it necessary to further strain insurance capacity by considering all employees as third parties whose claims must be covered by the liability policy when we believe the assumption of responsibility provides the appropriate response, and the final rule reflects this view.

The agency concludes that Government employees, but not PPLP employees, must be considered third parties whose claims against other launch participants will be responded to by the licensee's liability policy. Ensuring that the liability policy is available to cover claims of Government employees provides financial protection to all launch participants from Government employee claims. The following scenario and alternative results illustrate the financial risks that would confront all launch participants if Government employee claims were not eligible for coverage under the liability policy:

Scenario: Government employee ''A'' is injured at Cape Canaveral Air Station while monitoring licensed launch activities. The injury to ''A'' results from the launch licensee's negligence in performing the hazardous licensed operation of integrating the payload with the launch vehicle. The launch licensee's customer also performed in a negligent manner contributing to ''A's'' injuries. ''A'' files a claim under the Federal Employee Compensation Act (FECA), and receives prompt notification of his entitlement to compensation from the Government for his injury. FECA provides employee ''A'' an exclusive remedy against the Government for job-related injuries. Whether or not the Government's subrogated rights are waived under the CSLA, ''A'' may elect to sue the launch licensee and its customer, alleging that their negligence caused his injury. The launch licensee is a well-known launch services provider with considerable financial assets. Its customer is a not-for-profit research institution. ''A'' determines to sue the launch licensee alleging that its negligence caused his injuries and does not name the customer in the lawsuit. Assume that ''A'' will be successful and obtain a judgment of $1 million against the launch licensee.

Alt. 1: Under the view expressed by the agency in this final rule, the launch licensee has obtained a launch liability policy covering its liability to ''A.'' The liability policy responds to ''A's'' claim. Under the final rule, the licensee's insurer waives all rights of subrogation against the other insureds covered by the policy. Even if ''A'' had named the customer in his suit, the claim would be covered by the launch licensee's liability policy because the customer as well as other PPLPs and GLPs are named as additional insureds under the policy.

Alt. 2: The launch licensee's liability policy does not respond to ''A's'' claim because it excludes coverage for claims of any insured's employees against any other insured under the policy. The launch licensee presents the reciprocal waiver of claims agreement to the Government and argues that the Government has agreed to be financially responsible for its employees. Although FECA provides to ''A'' an exclusive remedy against the Government, the licensee's action is not barred *if* it can establish either a substantive right to indemnity under the Federal Tort Claims Act or a contractual right to indemnity under the reciprocal waiver agreement dictated by the CSLA. Assuming that ''A'' did not perform in a negligent manner and that the Government was not negligent in its supervision of ''A,'' and the licensee cannot establish any other duty owed to it by the Government, the launch licensee will not be successful under the Federal Tort Claims Act and must establish a contractual obligation on the part of the United States to indemnify it for ''A's'' recovery. The agency has long held the view that the Anti-Deficiency Act precludes the Government from accepting an unfunded contingent liability and does not find in the CSLA language a clear, unequivocal removal of this restriction. Moreover, even if a special appropriation were requested to cover the launch licensee's liability to ''A,'' Congress may refuse to appropriate the funds, leaving ''A'' with a $1 million judgment against the launch licensee.

Alt. 3: The launch licensee's liability policy does not respond to ''A's'' claim because it excludes coverage for claims of any insured's employees against any other insured under the policy and the licensee impleads its customer as a third-party defendant thereby defeating the CSLA objective of avoiding inter-party litigation. As a practical matter, the launch licensee has deeper pockets than the customer who may or may not have sufficient insurance or assets to cover its liability, leaving the licensee potentially responsible for satisfying the entire judgment from other general liability insurance coverage or corporate assets.

The first alternative described above provides the best outcome by: (i) relieving each participant of the need to obtain separate liability insurance to cover Government employee claims; (ii) providing reasonable assurance of financial protection to Government employees exposed to risk of loss in supporting commercial launch activities; and (iii) avoiding inter-party litigation.

In the final rule, the definition of ''third party'' is revised to remove the express exclusion of employees of private party launch participants. As revised, the regulation does not *preclude* coverage by a licensee's launch liability policy for claims by employees of PPLPs. A licensee may obtain additional liability coverage in excess of amounts required under the terms of a launch license to cover claims of other parties' employees. However, the amount of insurance required by the agency does not reflect this additional source of claims nor can claims of other parties' employees dilute or diminish the amount of insurance that must remain available to respond to the intended class of third-party claimants, that is, persons uninvolved in the launch as well as claims of GLP employees. As long as those claims are satisfied, the Government would have no say as to whether a licensee's liability policy may respond to satisfy claims of other launch participants' employees if such coverage is available under the terms of the policy, either as a liability claim or to cover the contractual indemnification obligation of an insured. However, in the event the liability insurance is exhausted, claims

of employees of PPLPs would be the responsibility of their employer under the reciprocal waiver agreement and not eligible for Government payment under 49 U.S.C. 70113. Because providing additional coverage for losses sustained by employees of PPLPs may result in some additional expense, the agency leaves it to the parties to negotiate appropriate cost-sharing arrangements if they elect to pursue this route.

To summarize briefly, the preceding discussion of risk allocation under the 1988 Amendments began by characterizing sources of claims for injury, damage or loss as falling within two groups: 1) those entities and individuals involved in licensed launch activities, and 2) those entities and individuals not involved in licensed launch activities. Those involved in licensed launch activities include PPLPs, GLPs, and their employees. Financial responsibility for claims of either group is provided as follows: Whereas PPLPs are required to waive claims for their own property damage or loss and obligate themselves contractually to cover or indemnify another launch participant in the event of losses sustained by one's own employee, the Government accepts a more limited responsibility. Through its participation in the reciprocal waiver of claims scheme, the Government agrees to waive claims for its own and its contractors' and subcontractors' property damage at a Federal range facility in excess of the amount of Government property insurance required under the license. The Government also accepts responsibility for losses of its employees and its contractors' and subcontractors' employees only to the extent they are not covered by required liability insurance, either because of a ''usual'' policy exclusion or because the policy limits have been exhausted. Claims of entities and individuals not involved in licensed launch activities would be addressed by the single liability policy obtained by the launch licensee to cover claims by any third party, as defined in this rulemaking, against any PPLP or GLP. Claims in excess of the required amount of liability insurance become the responsibility of the Government, subject to appropriation of funds, up to $1.5 billion (as adjusted for inflation occurring after January 1, 1989) above the amount of insurance that the agency requires.

Section-by-Section Analysis

Summarized in this section are specific comments addressing particular provisions of the proposed rule or responding to the agency's request for views on matters not covered above, followed by the agency's response to the comments. The agency has also identified certain provisions in the NPRM that would benefit from additional elaboration. Each is discussed below in numerical order. Nonsubstantive changes in the regulatory text of the final rule are not specifically identified or discussed.

Section 440.1—Scope; Basis

Section 440.1 as proposed indicates that the financial responsibility and allocation of risk requirements of this rulemaking apply to all licensed launch activities. There are no changes to this section in the final rule.

Kistler submitted comments and recommendations for the agency's consideration to the extent these rules would apply to launches of reusable launch vehicles (RLVs). Legislation under consideration in Congress would authorize the agency to license separately the reentry of an RLV and impose financial responsibility requirements to cover risks associated with the reentry event. Currently, launch, but not reentry, of an RLV would be covered by existing statutory requirements for financial responsibility. Accordingly, the agency intends for these rules to apply to licensed RLV launch activities, as defined in a license, and will develop rules for reentry financial responsibility once specific licensing authority over reentry is enacted.

Section 440.3—Definitions

The term ''contractors and subcontractors'' as defined in § 440.3(a)(2) of the NPRM prompted two comments. The proposed definition would encompass entities involved directly or indirectly in licensed launch activities, including suppliers of property and services and component manufacturers. McDonnell Douglas and Orbital Sciences expressed concern that broadening the definition from that contained in the form of Agreement for Waiver of Claims and Assumption of Responsibility (Cross-Waiver Agreement) currently in use by the agency would impose additional burdens on the licensee and its customers to implement the reciprocal waiver of claims requirements of § 440.17, in the following ways. Long-term contracts with subcontractors at every tier would have to be amended at significant burden and expense. By corollary, the licensee (and its customer) would be required to accept greater responsibility under the proposed form of reciprocal waiver of claims agreement set forth in Appendix II to the NPRM in the event it failed to pass on, or flow down, the cross-waiver requirements to all of its contractors and subcontractors. Commenters were also concerned that the expanded definition would remove the licensee's prerogative of either obtaining waiver of claims agreements from its contractors or indemnifying other parties for failure to implement properly the waiver of claims agreements. McDonnell Douglas clarified its comment by noting that the proposed definition would be acceptable if the indemnification option were preserved.

The agency believes these concerns are misplaced. The proposed definition has been broadly crafted in order to ensure that the liability insurance protection required of a launch licensee under the CSLA is available to cover third-party claims against any contractor or subcontractor involved directly or indirectly in licensed launch activities. Consistent with the CSLA scheme, the definition would include any contractor or subcontractor that has potential liability exposure to third parties as a result of licensed launch activities. However, in the section-by-section discussion of proposed § 440.17—Reciprocal Waiver of Claims Requirements, the NPRM explains that not all of those entities are expected or required to participate in the reciprocal waiver of claims scheme in order to carry out its purpose. Only those participants, including contractors and subcontractors, whose personnel or property are at risk in the conduct of licensed launch activities and who therefore could pursue claims against other participants in the event of injury, damage or loss need enter into the reciprocal waiver of claims agreement. (61 FR at 39012, July 25, 1996).

The indemnification provisions referred to by the commenters appear in paragraph 5 of the proposed form of reciprocal waiver of claims agreement in Appendix II of the NPRM. These provisions continue the agency's current practice of providing a contractual remedy to launch participants who must defend against claims brought by other launch participants' contractors or subcontractors because of the latter party's failure to implement properly the extension, or flow down, provisions of the agreement with its contractors and subcontractors. The indemnification and hold harmless provisions in paragraph 5 of the proposed form of agreement at Appendix II are not intended to relieve a launch participant of its responsibility to implement waivers of claims with its contractors and subcontractors by allowing the launch participant to elect

whether or not to comply. The reciprocal waiver of claims scheme works best when PPLPs implement the waiver of claims requirements fully and properly because failure to do so will result in additional costs and burdens to a party that must defend against a claim. (Commenters raised the very same arguments in opposition to the Government's view that it need not flow down the waiver requirements to its contractors and subcontractors. However, because the Government would be responsible for uncovered property losses sustained by those entities, the agency believes that the approach proposed in the NPRM wherein the Government would waive claims on behalf of its contractors and subcontractors should not be objectionable.)

The revised form of reciprocal waiver of claims agreement appearing in this final rule at Appendix II continues the current practice of requiring a three-party agreement to be executed by the licensee, its customer and the agency on behalf of the Government and imposing an express indemnification obligation on signatories to the agreement for failure to implement properly the flow down provisions of the agreement to contractors and subcontractors. Consistent with current practice, the agency leaves implementation of these provisions to launch participants and does not intend to monitor compliance with the flow-down requirements.

Two comments were submitted regarding the proposed definition of ''customer'' in section 440.3(a)(3). Hughes Electronics, a communications satellite manufacturer, endorsed the proposed definition, in that it would include any person to whom the procurer of launch services conditionally sells, leases, assigns or otherwise transfers its rights in the payload. Sea Launch suggested broadening the definition to include not just any person to whom the procurer of launch services has transferred a right in the payload, but also any person to whom the procurer of launch services has transferred a right to the launch services but remains in privity of contract with the launch services provider, such as when the procuring party transfers or brokers those rights to another party. The agency agrees with the comment and has revised the definition accordingly in the final rule and Appendix II agreement.

Through the broad definition of the term ''customer,'' the agency intends that the financial responsibility and risk allocation provisions of the CSLA, including rights to liability insurance coverage and eligibility for Government payment of excess liability claims, as well as the responsibility to participate in the reciprocal waiver of claims scheme, apply not just to the procurer (or transferee) of launch services, but also to any person having any rights in the payload to be launched. A question arises as to whether a person who places property on board a payload to obtain launch or payload services, or who has rights in the payload, should properly be viewed as a customer (or customer of the customer) or a contractor in that it is supplying property. The question is raised in the context of determining whether, and in what capacity, the person whose property is on the payload is expected to accede to the reciprocal waiver of claims scheme. The more traditional view of this person as a customer is correct and his or her rights and responsibilities under the cross-waiver agreement are equivalent to those of the customer who signs the three-party agreement with the licensee and the agency on behalf of the Government. Thus, it must be clearly understood that the customer who executes the three-party reciprocal waiver of claims agreement required as a condition of the license does so on behalf of all of its customers. It is incumbent upon that party to implement the extension, or flow down, provisions of the agreement to its customers and the same indemnification protections would be afforded the other launch participants in the event of the signatory customer's failure to do so. In essence, while the customer's customer becomes a third-party beneficiary of the three-party waiver of claims agreement, it is also expected to sign a waiver agreement and assume the burdens of a customer that signs the reciprocal waiver agreement with DOT and the licensee. The definition of ''customer'' is further modified in the final rule to include any person who places property on board a payload for the purpose of obtaining launch or payload services and the form of reciprocal waiver of claims agreement in Appendix II of the final rule is also revised to reflect the additional indemnification obligations of the customer.

The term ''Government personnel'' remains unchanged in the final rule and is used to facilitate the distinction between employees of Government launch participants (GLPs) whose claims must be addressed by the launch licensee's liability policy and employees of private party launch participants (PPLPs) whose claims are the responsibility of their employer, as discussed above. The agency considers FAA personnel who carry out inspections or compliance monitoring activities at the launch site to be Government personnel.

No comments were received on the proposed definition of ''liability'' contained in § 440.3(a)(8). However, the agency wishes to clarify that legal liability of the United States under international law may include treaty obligations of the United States and the liability insurance policies obtained by licensees must cover those obligations. No change in the proposed definition is required.

For reasons explained above in the supplementary information, the proposed definition of the term ''third party'' is revised in the final rule by removing the following sentence: ''For purposes of these regulations, employees of other launch participants identified in paragraphs (a)(15)(i)(B) and (C) of this section are not third parties.'' The licensee's liability policy may respond to losses sustained by employees of PPLPs either as a third-party or contractual liability and the agency is not foreclosing that possibility. However, the public is advised that the agency does not consider potential losses of PPLP employees in determining the required amount of liability insurance and does not find in the statute congressional intent to address those losses through the excess claims provisions of 49 U.S.C. 70113.

Definitions of other terms not specifically addressed herein remain as proposed in the NPRM.

Section 440.5—General

Section 440.5 as proposed sets forth the basic requirement that launch licensees must comply with financial responsibility and allocation of risk requirements established by the agency. Once established, the prescribed financial responsibility requirements become the exclusive requirements of the Government for financial responsibility, allocation of risk and related matters covered by 49 U.S.C. 70112 and 70113. Other agencies may impose requirements to address matters that are not covered by the financial responsibility provisions of 49 U.S.C. 70112, such as unemployment insurance or comprehensive automobile liability, and licensees are not relieved of the obligation to comply with them.

Proposed § 440.5(b) provides that the agency will prescribe in a license order the amount of financial responsibility a licensee must obtain. Similarly, any modifications of that amount would also be established through license orders.

Lockheed Martin, McDonnell Douglas and Orbital Sciences registered concern

over the agency's assertion of continuing authority to revise requirements based upon changes in exposed property or risks, indicating that such revisions create uncertainty and could impact cost and availability of insurance.

Operator licenses are currently issued for a two-year period, and may be renewed upon application by a licensee. It is reasonable to expect that some change will occur in the property or number of third parties exposed to risk of loss over the course of several years and the agency must be able to respond appropriately to those changes. Changes may result from actions of the licensee, such as a change in launch plans, the Government, or third parties. For example, a change in launch trajectory may heighten or reduce risks to third parties or Government property. Similarly, a person uninvolved in a licensee's activities may establish facilities on a launch site, possibly increasing risk to third-party property and increasing the value of the maximum probable loss (MPL) determination associated with licensed launch activities. A change in the MPL, in either direction, should properly be reflected in the mandated amount of insurance coverage.

The FAA does not anticipate frequent or rapid fluctuations in required levels of insurance. As indicated in the NPRM, transient Government property is not included as part of the MPL analysis. Although it must be covered by the licensee's insurance, the amount of insurance coverage required would not depend upon the presence or absence of transient Government property on any given day and it is not the Government's intent to alter this approach in retaining discretion to revise requirements. No change to this provision is required in the final rule to address the commenters' concern.

A number of comments were directed at § 440.5(c), which states the fundamental principle that a demonstration by a licensee of financial responsibility for liability, loss or damage suffered by the United States as a result of licensed launch activities is not a substitute for actual financial responsibility. Section 440.5 of the NPRM further provides the only circumstances under which the licensee would be relieved of this responsibility, as follows: (1) when liability, loss or damage sustained by the United States results from willful misconduct of the United States or its agents, including Government personnel; (2) third-party claims for bodily injury or property damage covered by the licensee's liability insurance exceed the amount of financial responsibility established by the agency under the regulations up to $1.5 billion (as adjusted for inflation occurring after January 1, 1989) above that amount and are payable under the payment of excess claims provision of the CSLA (49 U.S.C. 70113); (3) claims for loss or damage to property of the U.S. Government, its agencies, contractors and subcontractors exceed the required amount of Government property insurance; and (4) in the event the licensee has no liability for third-party claims arising out of any particular launch that exceed $1.5 billion (as adjusted for inflation occurring after January 1, 1989).

Lockheed Martin requested that the agency reconcile various statements regarding the Government's responsibility in the event of its own willful misconduct with other provisions in the proposed regulations concerning waiver of claims and assumption of responsibility.

Section 70112(e) of the CSLA directs the Secretary of Transportation to establish financial responsibility requirements and other assurances necessary to protect the Government and its agencies and personnel from liability, death, bodily injury, or property damage or loss as a result of licensed activities involving Government facilities or personnel. 49 U.S.C. 70112(e). Significantly, 49 U.S.C. 70112(e) does not relieve the licensee's obligation to cover claims for damage to Government property or personnel that result from willful misconduct of the Government or its agents. However, it does provide that the Secretary may not relieve the Government of liability under this subsection for death, bodily injury, or property damage or loss resulting from the willful misconduct of the Government or its agents. As a matter of public policy, the Government ought not be able to assert claims against the licensee or any other person for property damage that it suffers as a result of its own willful misconduct or that of its agents. In the limited circumstances in which willful misconduct by the Government or its agents results in property damage or loss to Government property, the licensee is relieved of ultimate responsibility for the claim under § 440.5(c)(1) of the final rule. Consistent with current practice, the Agreement for Waiver of Claims and Assumption of Responsibility presented in Appendix II of the final rule also requires that the licensee hold the Government and its agencies, servants, agents, employees and assignees harmless from liability for property damage or injury except where, among other things, the claim results from willful misconduct of the Government or its agents. Because Government contractors and their employees are not typically considered agents of the Government in most circumstances, the final rule is revised to remove reference to Government personnel in § 440.5(c)(1); paragraph 7(b) of the form of agreement presented in Appendix II of the final rule is similarly revised.

Two additional revisions appear in § 440.5(c) of the final rule. First, section 440.5(c)(3) effectively provides that the licensee is relieved of ultimate responsibility for damage to or loss of GLP property in excess of Government property insurance required under § 440.9(d). As a matter of public policy and consistent with current practice, licensees are not relieved of financial responsibility for excess Government property damage where the Government's claims result from the licensee's willful misconduct and this policy is now reflected in § 440.5(c)(3) of the final rule. No change is necessary in the Agreement for Waiver of Claims and Assumption of Responsibility in Appendix II of the rule because, consistent with current practice, it provides that waivers of claims shall not apply where the claims result from willful misconduct of any of the parties.

Second, several commenters pointed out an inadvertent omission in § 440.5(c)(4), as proposed. This exception to the licensee's ultimate responsibility for liability or losses sustained by the United States from licensed launch activities is intended to refer to claims in excess of $1.5 billion above the amount of required insurance, and is corrected in the final rule. The Agreement for Waiver of Claims and Assumption of Responsibility appearing in Appendix II of this final rule is also corrected.

Lockheed Martin further objected to § 440.5(c)(4), as corrected. It believes the practical effect would be to make the licensee jointly and severally liable with other launch participants for damages in excess of the required amount of insurance plus the $1.5 billion payable under 49 U.S.C. 70113, unless the licensee could prove no liability whatsoever. Lockheed Martin objected that limiting this provision to those instances in which the licensee proves it has no liability would be unduly burdensome to launch licensees. Lockheed Martin also noted that requiring a licensee to be solely responsible for these claims could even be uninsurable if the exposure were viewed by insurers as an unlimited indemnification, presumably of the

other launch participants, regardless of fault.

The intent of this provision is to ensure that the Government's liability will be covered as directed by 49 U.S.C. 70112(e) and the agency has retained the proposed approach in the final rule. However, nothing in this rule prevents a licensee from contractually allocating this risk with other PPLPs so that the cost of the liability would be shared among responsible PPLPs.

Section 440.7—Determination of Maximum Probable Loss

This section of the final rule sets forth the agency's procedure for issuing maximum probable loss (MPL) determinations that form the basis for financial responsibility requirements contained in license orders. Lockheed Martin commented on this section of the NPRM by indicating that it is difficult to understand how actual determinations are made and what the impact of the NPRM would be on existing MPL determinations.

It has not been the agency's intent to announce changes to its MPL methodology through this rulemaking. Rather, the agency has attempted to shed some light on the methodology employed in setting insurance requirements pending completion and issuance of a comprehensive report on MPL. In doing so, the agency learned that its inclusion of certain risks in the MPL analysis, such as risks to Government personnel, was not clearly understood within the commercial launch industry. To avoid additional misunderstandings and to facilitate industry's ability to obtain financial protection from launch risks, the agency agrees with the comment recommendation to make its analytical documentation available to licensees upon request. In fact, this is the agency's current practice although few licensees have made such requests.

Two launch licensees, Orbital Sciences and McDonnell Douglas, commented on the 90-day period in which the agency issues its MPL determination following receipt of all required information. Section 440.7(b) provides for notification to a licensee if issuance of the MPL determination will be delayed due to statutorily-mandated interagency consultations. The commenters expressed concern that an open-ended review period is contrary to the CSLA's intent to protect launch licensees by limiting and clearly defining the review period. The agency understands the industry's need to receive MPL determinations in order to obtain required insurance in a timely manner. Moreover, until the agency establishes its financial responsibility requirements, insurance requirements imposed by the Federal range facility remain in place and are not preempted or superceded by the agency's risk-based requirements under the CSLA. The agency commits to facilitating as efficient and expedited an interagency review as practicable but hopes the industry will understand those infrequent occasions when the process is not as fluid as intended.

Kistler also expressed reservations that the 90-day provision for issuing an MPL determination would compromise the fast turn-around anticipated for RLV operations. Kistler suggested that MPL determinations could be issued for a class of launches and payloads at the time a license is issued, and that the determination could ''stand'' unless a proposed launch or payload falls outside of specified parameters. In that event, only the changed information should be required of the licensee for purposes of recalculating the MPL determination using the initial determination as a baseline. The agency agrees with Kistler and, in practice, already implements the approach proposed in Kistler's recommendations. The agency notes that Kistler is not yet licensed to conduct launch activities and therefore may not be familiar with the agency's approach to establishing insurance requirements that cover a range of authorized launch activities within identified parameters.

Section 440.7(d) provides that the agency amends an MPL determination, if warranted, before completion of licensed launch activities when new information requires an adjustment in insurance requirements. Lockheed Martin, Orbital Sciences, and McDonnell Douglas expressed concern that the ability to amend insurance requirements would create uncertainty for the industry and add unpredictability to the industry's ability to manage risks. Marsh & McLennan offered its concerns that licensees and their brokers be allowed sufficient time—at least 30 to 60 days—to work with underwriters to increase policy limits and noted that doing so may be impossible if insurance market capacity is insufficient to provide increased limits at a reasonable price.

As indicated above in the discussion of comments to § 440.5, the agency is apprised of new information from time to time in the life of a license, currently a two-year renewable term for operator licenses, that affects the MPL determination. In some cases, the MPL may even be reduced on the basis of this information. It would be irresponsible to ignore changes in the risks that attend launch activities; however, the FAA intends to provide licensees a sufficient period of time in which to comply with revised insurance requirements.

Kistler objected to increasing insurance requirements mid-flight. Section 440.7(d), as proposed, was intended to allow the agency flexibility to address longer term changes in risk that would affect insurance determinations for the remaining life of a launch license. The need to do so is driven, generally, by the agency's practice of issuing licenses that cover a multitude of launches or that remain effective for a multi-year, renewable term. It was not intended to alter risk allocation arrangements between the launch participants and the Government in mid-flight by revising required levels of insurance after ignition. The agency does not agree that any change to this provision is required in the final rule.

Appendix I of the final rule contains information requirements relevant to establishing MPL. Information concerning post-flight processing operations may become unnecessary if the agency defines licensed launch activities as ending, for purposes of ground operations, upon successful lift-off of a launch vehicle. In that event, the agency would amend its requirements by removing post-flight processing operations from Appendix I.

Section 440.9—Insurance Requirements for Licensed Launch Activities

Section 440.9 presents in a regulation the requirement for launch licensees to obtain two types of insurance coverage—one for third-party liability and one for damage or loss to Government property at a Federal range facility. Section 440.9(b) requires that the third-party liability policy protect Government personnel as additional insureds. Sea Launch indicated its belief that employees of the PPLPs should also be identified as additional insureds. Lockheed Martin queried why Government personnel would be treated differently than other employees.

The agency agrees with the commenters and currently requires that all launch participant employees be protected from third-party liability. This coverage is routinely provided in liability policies that name, among the additional insureds, employees of the various launch participants acting within the scope of their employment. The CSLA singles out personnel employed by Government agencies in the statutory requirement set forth in 49 U.S.C. 70112(a)(4), and for this reason so did § 440.9(b), as proposed. The final rule is revised to require liability coverage for third-party claims against

employees of all launch participants involved in licensed launch activities.

The CSLA specifically mandates protection for the Government, its executive agencies and personnel from liability, death, bodily injury or property damage or loss as a result of a launch or operation of a launch site involving a facility or personnel of the Government. 49 U.S.C. 70112(e). Thus, the agency concludes that it is reasonable and necessary that employees of the Government be classified as both additional insureds and third parties. And, for reasons detailed above in the discussion of risk allocation, passes on similar status and benefits to employees of Government contractors and subcontractors involved in licensed launch activities. Some of the comments received point out that employees are viewed, for insurance purposes, as part of the entity that employs them and therefore it would be unusual, and not customary, to also view them as claimants against the policy. Accordingly, the approach adopted in the final rule with respect to Government personnel is the exception.

Section 440.9(c) provides that the agency will prescribe liability insurance requirements not to exceed the lesser of $500 million or the maximum available on the world market at a reasonable cost, as determined by the agency. Marsh & McLennan offered, as a caveat to this provision, that insurers of weak or questionable solvency that provide coverage at reasonable cost may not be financially able to cover claims and that care should be taken in determining what is available at reasonable cost. The agency appreciates this caution and hopes to avoid this situation by requiring that policies be placed with insurers of recognized reputation and responsibility, as provided in § 440.13(a)(8) of the final rule. A future rulemaking may be necessary to provide criteria for assessing an insurer's acceptability to the agency.

Section 440.9(d) sets forth the requirement for Government property insurance and requires coverage for property of Government contractors and subcontractors at a Federal range facility. In its comments, Lockheed Martin observed that doing so relieves the Government from the obligation to pass on to its contractors and subcontractors the waiver of claims provisions of § 440.17, as reflected in the form of agreement in Appendix II to the NPRM, and relieves those contractors and subcontractors from the obligation to assume responsibility for their property damage or loss. The comment stated that the rationale for disparate treatment of Government contractors and subcontractors as compared to PPLPs' contractors and subcontractors is unclear.

The agency's rationale for treating Government contractors and subcontractors differently than PPLPs is based on statutory language. Whereas 49 U.S.C. 70112(b)(1) directs the licensee to make a reciprocal waiver of claims with its contractors, subcontractors, and customers, and the contractors and subcontractors of its customers, involved in launch services, 49 U.S.C. 70112(b)(2) directs the Secretary of Transportation to make, for the Government, executive agencies of the Government involved in launch services, and contractors and subcontractors involved in launch services, a reciprocal waiver of claims with the licensee and other PPLPs. (Emphasis added.) This difference in language is meaningful. As stated in the NPRM, the agency views Government contractors and subcontractors as third-party beneficiaries of the reciprocal waiver agreement and the Government is responsible for protecting their interests. In addition, by waiving claims for property damage in excess of required insurance on behalf of its contractors and subcontractors, the Government accepts the additional risk of their property damage. The additional risk to the Government is managed in two ways. First, the licensee is required to obtain property insurance covering damage or loss to property of Government contractors and subcontractors involved in licensed launch activities, in addition to Government-owned property. Second, Government contractors and subcontractors must also maintain insurance for their property, the cost of which is charged to the Government as an allowable cost. In the event Government contractor property is damaged, the Government would look first to the licensee's property policy for coverage in order to relieve financial risks to the Government. The contractor's insurance would cover the second tier of risk up to policy limits. In both instances, the risk of loss above statutorily-required insurance is borne by the Government.

A technical correction is added to § 440.9(d) to more accurately reflect Government contractor and subcontractor property that must be covered under this insurance requirement as that belonging to contractors and subcontractors involved in licensed launch activities. As stated in the NPRM, other Government contractor and subcontractor property would be covered by a licensee's launch liability policy (61 FR 39000–39001).

An inadvertent omission is corrected in § 440.9(e) of the final rule by providing that the maximum amount of property insurance that would be required under this provision is the lesser of $100 million or the maximum amount available on the world market at a reasonable cost, as determined by the agency.

Two commenters, Orbital Sciences and McDonnell Douglas, objected to the agency's view that all Government property located on the Federal range facility must be covered by insurance, wherever located. The commenters viewed this requirement as excessive and offered, as an alternative, that only Government property located in the launch hazard corridor as defined by the National Range Safety Office should be covered. In clarifying remarks, McDonnell Douglas suggested that perhaps Government property outside this corridor should be self-insured by the Government and that reclassifying it as third-party property may simply shift the risk (and therefore the cost of insurance) to different insurance rather than limiting industry's risk exposure for damage to Government property. Orbital Sciences submitted supplemental comments in which it narrowed further the scope of Government property that it believes should be covered by insurance as that within the care, custody and control of the licensee. Orbital Sciences asserted that the cost of insuring other Government property, even that within the launch hazard corridor, could be prohibitive and that a requirement to insure such property does not account for differences in liability and property insurance.

The agency considered defining the specific property at a Federal range facility that must be covered by property insurance and found this approach cumbersome and unnecessarily limiting and risky for the Government. Although accident scenarios can be used to identify the property most exposed to risk, they may not cover the full range of accidents which, by definition, are unpredictable events. Also, this alternative approach would eliminate from coverage any transient property not identified by the Government in its insurance requirements but that was on the site at the time of a launch accident and therefore must be covered by insurance.

The agency's approach to assuring coverage for Government range assets exposed to risk from commercial launch activities is necessarily comprehensive. The CSLA is clear that financial responsibility and other assurances are necessary to protect the Government

from the risk of damage or loss when its property or personnel are exposed to risk from licensed activities. The agency views as significant the distinction in the CSLA between liability insurance for third-party claims and Government property insurance protection that must respond to Government claims against any person. The purpose of the Government property insurance requirement is to ensure funds are immediately available to restore valuable range assets and property damaged by a commercial launch effort. This requirement is not limited to the space launch complex within the immediate care, custody and control of the licensee. An errant launch vehicle may expose other range property to risk. For example, an Athena-2 launch from Launch Complex 46, operated by Spaceport Florida Authority under an FAA license, at CCAS exposes both Launch Complex-36A and 36B, utilized for Atlas launches, to risk of damage or loss within the MPL threshold for quantifying Government property risks. Accordingly, coverage for all range assets, as well as Government contractor property involved in a licensed launch, is consistent with CSLA objectives and risk allocation principles. Furthermore, the agency does not regard the Government's waiver of claims for excess property damage as extending beyond the Federal range facility at which a launch takes place and any adjacent or nearby range assets. As explained in the NPRM, no greater risk or cost to licensees should result from considering off-site, non-launch related Government property as equivalent to any other third-party property for purposes of liability coverage. Section 440.9(c), as revised in the final rule, makes clear that claims for such property damage or loss are covered by the licensee's launch liability policy. This provision reflects the FAA's existing practice in establishing financial responsibility requirements for third-party liability and should not be construed as requiring excess insurance for waived Government property damage claims.

The agency currently affords a fair amount of latitude to the commercial launch industry in providing coverage for Government property. For example, the agency has allowed the licensee's property policy to cover only that Government property which is in the licensee's care, custody and control, and risks to all other Government range property to be addressed through the licensee's liability policy, as long as doing so does not reduce the amount of coverage that must be available to cover third-party liability. The agency accepts this approach based on its understanding that it relieves a burden on the launch industry and conforms with certain insurance industry practices for insuring property. Also, because all launch participants are insureds, the liability policy is expected to respond to Government claims for damage or loss to range assets, regardless of fault, absent willful misconduct by the Government or its agents. The agency will continue to allow certain Government property to be addressed through the liability policy as long as doing so does not defeat the statutory objective of ensuring funds are quickly made available to restore or replace damaged Government assets. However, the agency is not willing to compromise the effectiveness or breadth of coverage it requires for Government range assets and property.

Section 440.11—Duration of Coverage

Section 440.11(a) provides that insurance coverage must attach upon commencement of licensed launch activities and remain in effect for the time period specified in the license order. The time period is intended to extend up to the point when risk to third parties and Government property is sufficiently small, as determined through the agency's risk analysis, such that insurance is no longer necessary. As proposed, § 440.11(a) would allow the agency to amend the required duration in the event of a launch anomaly to ensure that insurance remains in place until the resultant risks are considered to be sufficiently small. As explained in the section-by-section analysis of the NPRM, the period of time required for orbital launch insurance is typically 30 days measured generally from payload insertion. Thirty days is considered to be sufficient time to assess the possible consequences of a launch anomaly, such as delivery to a wrong orbit or failure of a payload to separate from the vehicle's second stage such that reentry is likely, and determine whether extended insurance coverage appears to be necessary.

The agency's current practice is to require that insurance remain in place for 30 days following flight of the launch vehicle. As explained in the NPRM, the agency has viewed 30 days as an appropriate length of time in which to determine whether an anomalous situation has occurred, the consequences of which are yet unknown. The agency also has taken the position in the past that in the event such a situation arises, the agency can require the licensee to maintain its insurance for more than 30 days, until risks to third parties or the Government can be determined to be sufficiently small such that insurance is no longer needed. This approach was utilized early in the agency's licensing program when an Intelsat payload failed to separate from the second stage of a Titan launch vehicle. The agency considered that the second stage and payload would reenter the earth's atmosphere, with the possibility of reentry impacts and resultant damage, and advised the licensee that if reentry did not occur within the 30-day period specified in the license for insurance duration, the agency would require the licensee to extend its policy coverage. (This eventuality was considered by the agency in assessing MPL. At issue was the required duration of insurance, not the sufficiency of amount.) The agency's authority to dictate this extension and the licensee's ability to respond were never tested because reentry took place within three weeks of the launch event.

Lockheed Martin, Orbital Sciences, and McDonnell Douglas objected to the proposal that would allow the agency to extend the required duration of insurance coverage in the event of a launch anomaly. All three licensees stated that this requirement was not in conformance with insurance practices and would be difficult and costly, if not impossible, to fulfill. McDonnell Douglas objected on the grounds that doing so places unrealistic and open-ended liability on the commercial launch industry and therefore undermines the National Space Policy and CSLA goals of promoting the growth and international competitiveness of the industry. Lockheed Martin pointed to this proposal as a clear instance of the Government's efforts to reallocate risks from the Government to the licensee. Lockheed Martin opined that if risk analysis is the basis for the agency's determination of the appropriate duration of insurance, then the anomaly should be viewed as foreseeable and addressed in the MPL analysis and determination. In the event the anomaly was so improbable that it would not be a factor in determining MPL, under the CSLA the Government assumes the risk either by waiving property damage claims or providing indemnification for third-party losses. Marsh & McLennan cautioned that uncertainties in the insurance market make it difficult to know whether coverage available and provided one year will be available the next and these market factors should be taken into account in determining the required duration of insurance requirements.

Based on these comments, the agency has reconsidered its views on the appropriate duration of insurance coverage, keeping in mind that Arianespace provides customers with a 3-year indemnification for liability. The difficulty in establishing appropriate time limits on insurance stems from the statutory language and the Government's continuing prospect of fault-based liability under the Outer Space Treaties long after the launch is concluded. The Government's exposure under the Liability Convention, in particular, suggests that insurance should be required to remain in place for as long a time as practicable. However, absent the *quid pro quo* notion underlying the allocation of risk provisions of the CSLA, that is, if there will be no Government payment of excess claims (or ''indemnification'') for damage not proximately caused by the launch event, the agency would feel reluctant in requiring long-term insurance.

In reevaluating its position on the appropriate duration of insurance, the agency considered an event test, a time test, and a combination of the two.

Under an event test, the duration of insurance coverage could be tied to a specific event for a nominal launch, such as payload separation or safing of the vehicle's upper stage, as explained in the NPRM. However, if an anomalous event occurred, it would be difficult to identify a particular point in time at which insurance coverage could terminate. Forecasting a range of anomalous on-orbit scenarios could be extremely time-consuming, yield great uncertainty and result in extremely long timeframes (up to hundreds of years, perhaps) associated with measurable risk.

Alternatively, a time test could be fashioned to capture only near-term anomalous events that could result in third-party losses or damage to Government property, such as anomalous payload delivery or separation that results in an unplanned reentry or collision. However, it could also result in an extremely long-term insurance requirement because anomalous situations could result in adverse conditions remaining long after launch vehicle flight is concluded. These situations are difficult to predict, because the space environment is constantly changing with additional placement of objects on orbit and the effects of orbital decay.

The agency has determined that a combination of event and time tests should be utilized in setting the required duration of insurance for licensed launch activities. The result is similar to the current requirement of the agency that insurance remain in place for 30 days following launch, measured generally from the time of payload separation. However, the revised requirement in the final rule limits the duration of insurance to 30 days following launch and removes the agency's discretion to impose extended insurance requirements on licensees during the 30-day period.

Accordingly, for risks associated with orbital launches, the agency believes the appropriate insurance duration is 30 days following launch, measured from payload separation for nominal launches or attempted separation in the event an anomaly results in unsuccessful payload separation. For other launch anomalies or failures, the 30-day requirement runs from initiation of launch vehicle flight. For suborbital launches, insurance duration is at least through motor impact and payload recovery; however, the agency may prescribe a different duration in a license order depending upon the results of its risk analysis. Suborbital launches may, in the foreseeable future, include reusable launch vehicle activities that must be evaluated on a case-by-case basis. The agency reserves discretion to conclude that a different duration of required insurance is appropriate for such activities based on its case-by-case evaluation of suborbital reusable launch vehicle missions and their attendant risks.

For purposes of ground operations the licensee is required to maintain insurance at all times during occupancy of a Federal range facility under a launch license.

Despite limitations on the duration of required insurance, the space industry should be cognizant of its liability in the event its space object damages another on-orbit space object or reenters at any time, and manage risks appropriately. The industry should also be aware of views previously expressed by congressional staff that a sufficient causal nexus does not exist between a launch and a planned payload reentry that causes third-party damage or loss to invoke the Government's responsibilities under 49 U.S.C. 70113.

In the NPRM, the agency requested views on the appropriate causal nexus that must exist between a launch event and a third-party claim in order for the payment of excess claims provisions of the CSLA to be applicable. Under 49 U.S.C. 70113(a), the Government provides for the payment of successful claims against a launch participant ''*resulting from* an activity carried out under the license.* * *'' (emphasis added) As pointed out in the Supplementary Information accompanying the NPRM, the Government's responsibilities under 49 U.S.C. 70113 apply from the first dollar of loss when the licensee is no longer required to maintain insurance under the license if the claim results from the licensed activity. However, events associated with a launch may result in damage years after the launch is concluded and it is not clear at what point events become too attenuated from the launch to be considered eligible for consideration under 49 U.S.C. 70113.

Only Sea Launch responded and questioned the wisdom or practicality of attempting to characterize this nexus beyond the statutory language of ''resulting from an activity carried out under the license.'' In doing so, the comment noted that a proximate cause analysis would be required and would depend on the unique facts of the situation. The agency agrees that determining eligibility for payment of excess third-party claims is necessarily a fact-based inquiry and will depend on the particular circumstances giving rise to the claim and does not propose to issue rules of general applicability to determine eligibility requirements.

Section 440.11(b) provides that financial responsibility shall not expire by its own terms prior to the time specified in a license order. Many licenses are issued for a multi-year period and may be renewed upon application of the licensee; however, the agency understands that certificates evidencing insurance coverage are typically valid for one year. This has not been a problem as long as evidence of policy renewal is provided to the agency sufficiently in advance of the certificate expiration date to allow the agency ample review time. Accordingly, the final rule is revised to provide that a renewal certificate must be provided at least 30 days in advance of the expiration date of the current certificate. A licensee may petition the agency for a waiver or extension of this or any time requirement in the final rule if it is unable to comply.

Environmental and Clean-Up Costs

The agency's current practice of determining maximum probable loss from claims resulting from licensed launch activities does not include assessment of the environmental consequences associated with licensed launch activities. These risks are difficult to quantify and, to the extent coverage is not available, assigning a dollar value to these risks could increase required amounts of insurance without assuring coverage.

As part of the NPRM discussion on the appropriate duration of required insurance, the agency requested comments on a number of related issues having to do with environmental consequences of launch activities. First, to what extent should insurance be required to compensate claims of third parties and the Government for short-term, or immediate, environmental damage or, alternatively, whether the costs of cleaning up hazardous waste or removing this type of damage should be paid by the launch licensee to the Government as part of launch services which are charged as a direct cost under the CSLA. Second, to what extent should insurance be required to protect against claims for long-term environmental or property damage. As part of this request for views, the agency asked commenters to address the implications on MPL determinations of requiring insurance coverage for these potential claims and the adequacy of existing insurance ceilings under the CSLA ($100 million for Government property coverage and $500 million for third-party liability insurance, or the maximum available on the world market at a reasonable cost if insurance up to those amounts is not available). Third, whether and to what extent insurance to protect against property damage resulting from orbital debris long after the launch is completed should be required. The damage contemplated by the question could be to other on orbit or airborne objects or to property on the ground in the event of reentering debris.

Only Lockheed Martin offered a view with respect to the immediate environmental consequences associated with a launch event. Lockheed Martin indicated that this type of immediate consequence should not be treated as a matter for ''direct cost'' charges to the launch licensee, but should be addressed in terms of an appropriate allocation of financial responsibility for the risk.

In clarifying its view, Lockheed Martin distinguished between environmental consequences and the usual activities involved in readying a launch pad or complex for future use. Typically, Lockheed Martin would clean up the launch complex from which its launch has taken place in anticipation of the next launch campaign. For example, it would remove any ground debris and restore the complex to its prior condition, as required under the terms of its agreement with the Federal range facility. If it failed to do so, the Federal range could provide this service and under these circumstances could charge the direct cost of doing so.

Lockheed Martin pointed to the legislative history accompanying the 1988 Amendments to the CSLA which lists the types of Government support that were envisioned to be provided under direct costing principles as: operations and maintenance services and range support costs. Operations and maintenance services include facilities engineering support, vehicle and equipment support, launch complex support, power system support, and roads and ground support. Range support costs include logistics, ordinance support, radar support, communications support, tracking support, documentation, fire services, range safety, work control (administration), security services and meteorological services. S. Rep. 100–593, 100th Cong., 2d Sess., at p. 24. It appears that launch complex maintenance and range services are appropriate for direct cost charging. In the commenter's view, the notion of environmental damage falls outside these categories and was not intended to be subject to the direct cost pricing provisions of the CSLA for launch property and services provided by the Government to the private sector.

Lockheed Martin indicated that the consequences of a particular launch, like any other damage, should be part of the financial responsibility and risk allocation scheme provided in the CSLA. However, Lockheed Martin's comments further indicated that the issue of how to allocate financial responsibility for risks associated with environmental damage, both short-term and long-term, is extremely complex and merits further study and analysis before the agency proceeds to rulemaking.

McDonnell Douglas noted that long-term environmental damage insurance is generally unavailable, and to the extent it is obtainable would be narrow and limited in coverage, not to mention cost prohibitive. McDonnell Douglas felt strongly that claims of this nature should not be included in the MPL determination for a licensed launch activity.

The issue of environmental damage before the agency in this rulemaking can be reframed as follows: whether the consequences of a launch event to which CSLA-based insurance and waivers of claims are intended to apply should be limited to immediate impacts and destructive risks, such as collision of a launch vehicle with ground, airborne or space objects or the consequences of explosion. (Even an explosion or collision could result in the types of short-term environmental consequences under consideration.) By short-term or immediate risks, the agency intends to refer generally to the sudden, immediate, and identifiable and foreseeable, though unintended, consequences of a launch. These consequences could include fuel spills, toxic release, and ground contamination resulting from a particular launch. Whether or not insurance coverage is available for these risks, they are comprehended by the terms ''bodily injury'' and ''property damage'' for which the CSLA requires insurance and they are reasonably intended to be addressed by CSLA financial responsibility and risk allocation provisions. This is also consistent with an early Air Force commercialization agreement which defines ''damage'' as including ''that caused by a release of or exposure to a hazardous substance, as that term is defined in [CERCLA]'' and the current Air Force definition of ''damage.'' These risks are properly addressed through the CSLA and should be comprehended by the statute's risk allocation scheme. A future rulemaking may be necessary to better define the types of immediate environmental consequences intended to be included under the CSLA scheme for risk management.

The agency views long-term environmental consequences, sometimes referred to as long-tail liability, as more problematic for a number of reasons. First, it would be difficult to prove that liability attaches to a particular launch event. It is probably impossible to ascertain whether damage results from a government or commercial launch when the same vehicles are used for both purposes, and perhaps an apportionment theory would be required. There is no indication that CSLA risk allocation mechanisms, with ceilings on insurance and statutory references to claims resulting from a particular launch, were intended to address long-term environmental consequences. Similarly, there is no indication that the so-called indemnification provisions of the CSLA were intended to cover claims other than those directly and proximately associated with a particular launch event. Accordingly, the agency takes the position that the consequences of a licensed launch that are reasonably foreseeable and proximately caused by a particular launch are covered by CSLA financial responsibility and risk allocation. Long-term environmental consequences would not qualify for coverage under this characterization and, accordingly, the FAA concludes that their associated risks are not

intended to be addressed through CSLA risk-based insurance requirements and risk allocation.

Section 440.13—Standard Conditions of Insurance Coverage

Section 440.13 provides the terms and conditions applicable to insurance policies licensees must obtain under existing licenses and the proposed regulations.

Marsh & McLennan requested clarification of the requirement in § 440.13(a)(2) that policy limits apply separately to each occurrence and to the total claims arising out of licensed launch activities in connection with any particular launch. The per-occurrence limit applies to the total of all claims arising from the same occurrence, and not for each claimant per occurrence, and this is made clear in § 440.13(a)(6). It provides that all policy provisions, except the policy limits, must operate as if there were a separate policy with and covering the licensee and each additional insured. To remove any doubt, the final rule is revised to clarify that the policy limits apply for each occurrence and that for each occurrence the limits apply to the total of claims that arise out of licensed launch activities in connection with any particular launch.

The three current launch licensees, Lockheed Martin, Orbital Sciences and McDonnell Douglas, cautioned that two of the required terms, breach of warranty coverage and a severability of interest clause are available under current conditions in the insurance market but may not be in the future. In clarifying remarks, one commenter indicated that a licensee's ability to obtain the required coverage may become an issue if coverage not currently provided, such as for claims of Government personnel, is required. Licensees may request a waiver of these terms or petition for rulemaking in the future if market conditions make it impossible to comply with them.

Section 440.15—Demonstration of Compliance

Section 440.15(a)(1) of the final rule continues the agency's current practice of requiring that licensees submit an executed reciprocal waiver of claims agreement at least 30 days before commencement of licensed launch activities involving the customer(s) that is required to sign the agreement. This requirement appears in all currently effective financial responsibility license orders. Under this final rule, the term ''licensed launch activities'' would be defined in a launch license; however, the agency is in the process of standardizing the definition of ''launch'' in a related rulemaking addressing launch licensing requirements and standards.

A question arises as to whether the agreement must be submitted before commencement of any licensed launch activities or whether timing of its submission should be tied to arrival of the customer's payload. Presumably, the customer would not have significant property at risk before arrival of its payload and therefore does not need to waive claims for damage or loss to its property until that event. However, as between the launch licensee and the Government, and the respective contractors and subcontractors of each, the agency views with concern the risk to which each participant is exposed in the event of damage to its property or injury to personnel in the absence of an executed waiver of claims agreement. Moreover, taken literally, until the Government executes the reciprocal waiver of claims agreement with the licensee and customer, the Government has not waived claims in excess of required Government property insurance for damage or loss to its property and PPLPs could face liability exposure for excess claims by the Government or its contractors and subcontractors.

To avoid these unnecessary risks, the time requirement set forth in the final rule for submission of a reciprocal waiver agreement signed by the licensee and its customer is 30 days before the licensee intends to commence licensed launch activities involving that customer. Generally speaking, commencement of licensed launch activities involving a particular customer should coincide with arrival of the launch vehicle or its major components at the launch site. The agency is not aware of circumstances in which a launch services provider engages in a launch campaign, consisting of such hazardous activities as erecting the launch vehicle or processing vehicle components at the launch site, without a customer under contract for the launch event. However, because outstanding operator licenses utilize the agency's gate-to-gate approach to licensing commercial space launch activities, it is foreseeable that a launch vehicle operator will occupy a launch site under an FAA license before arrival of the launch vehicle and may perform preparatory activities other than vehicle processing. Because these activities are not typically ultra-hazardous in nature, the agency views their associated risks as limited in nature and therefore manageable without the benefit of the completed statutory risk allocation scheme dictated by the CSLA. The agency will not require that a reciprocal waiver of claims agreement be submitted 30 days prior to the licensee's occupancy at the site, but rather, 30 days before it intends to commence licensed launch activities involving a particular customer.

Early submission of the agreement allows the agency sufficient time to complete its review, resolve any outstanding concerns surrounding a licensee's demonstration of financial responsibility, and fulfill the Government's responsibility to waive claims on behalf of its agencies and contractors and subcontractors involved in launch services. Issues may arise that require modification of an agreement to accommodate a Government agency customer, a reluctant customer, participation of multiple customers in the inter-party waiver scheme, or a licensee's request to modify the standard form of agreement that accompanies a launch license. On occasion, resolution of a party's concerns delays execution and submission of the agreement by the licensee or the agency's ability to complete execution of the agreement on behalf of the U.S. Government during the 30-day period preceding commencement of licensed launch activities involving a particular customer. The agency has demonstrated its willingness to work with licensees and customers to address their unique concerns. However, in the absence of an executed reciprocal waiver of claims agreement, launch participants may be assuming risks that are intended to be allocated through the reciprocal waiver scheme dictated by 49 U.S.C. 70112(b).

To avoid this result and ensure that launch participants remain mindful of the time constraints imposed by these regulations and in license orders, the agency intends to enforce compliance with the time requirements codified in § 440.15 of the final rule, absent good cause shown for waiving or extending them. Enforcement of these requirements may be accomplished through the imposition of civil penalties in accordance with the CSLA or suspension of the authorization granted in a launch license to perform licensed activities. Licensees are urged to keep the agency informed, in writing, of foreseeable difficulties in meeting these regulatory requirements so that the agency may determine whether an extension of the deadline for submission of an agreement is warranted. Of course, once the agreement is executed by all three parties, licensees need not wait an additional 30 days before commencing

licensed launch activities involving a particular customer.

Evidence of insurance would be required at least 30 days before commencement of any licensed launch activities, and additional time is required if a form of financial responsibility other than insurance is used. The agency's experience has been that most licensees are able to comply with these time constraints and all have been extremely responsive to agency questions and concerns regarding evidence of insurance.

Proposed § 440.15 contains additional requirements for licensees in demonstrating compliance with financial responsibility requirements from those currently required in license orders. Specifically, the proposed regulations would require a signed opinion of the insurer stating that the insurance obtained by the licensee complies with regulatory requirements and license orders concerning insurance. The three launch services providers licensed by the agency, Lockheed Martin, Orbital Sciences, and McDonnell Douglas, objected to this requirement and stated that it would be difficult to obtain an insurer's opinion. Marsh & McLennan also asserted that insurers will not agree to provide an opinion letter because it could impose additional obligations on the insurers that are above and beyond the terms and conditions of policies. They prefer to provide certificates of insurance and let the certificates speak for themselves. Orbital Sciences and McDonnell Douglas suggested that requiring an opinion of the insurance broker should suffice.

The agency will accede to the commenters' suggestion that a signed opinion of the insurance broker accompanying insurance certificates will be sufficient under the regulations. The agency's current practice is to accept insurance certificates in lieu of policies as evidence of compliance with insurance requirements. Doing so relieves a burden on licensees to supply policies in advance of licensed launch activities and we understand that complete policies may not be available for agency review sufficiently in advance of licensed launch activities even though the required coverage is in place. This practice also relieves the agency of the burden of reviewing policies.

The agency continues to be satisfied with this approach but stresses the caveat stated in license orders and reflected in these regulations that demonstration of financial responsibility does not relieve the licensee of ultimate responsibility for liability, loss or damage sustained by the United States. The agency may need to reconsider its position if there is any indication that the coverages and exclusions are not sufficiently detailed in insurance certificates to assure the agency of the adequacy of licensees' compliance.

Section 440.17—Reciprocal waiver of claims requirement and Appendix II

Comments received on § 440.17 and the proposed form of waiver of claims agreement presented in Appendix II to the NPRM concern the third-party status accorded to Government personnel in the NPRM and the proposed method by which the Government waives claims for its contractors and subcontractors. Most of these comments have already been addressed and resolved by clarifying that, for purposes of establishing liability insurance requirements, employees of the Government and its contractors and subcontractors are considered third parties. Employees of all other launch participants are the responsibility of their employing entity. Through the reciprocal agreement required under this section, PPLPs agree to be responsible for their employees' losses and property damage. The agreement to be responsible for losses suffered by an employee amounts to a contractual obligation to hold harmless and indemnify other launch participants against whom an employee has made a claim and this obligation is now expressly stated in the form of agreement presented at Appendix II of the final rule. According to the comments received, insurance is available to cover this contractual obligation.

Additional comments on the requirements of § 440.17 and the proposed form of agreement are discussed below.

Sea Launch suggested that launch participants should be required to waive claims against employees of the other launch participants. The agency agrees in principle with this comment because claims by PPLPs against employees would amount to an attempt to circumvent the inter-party waiver of claims. The reciprocal waiver of claims agreement currently in use requires that a signatory to the agreement hold harmless and indemnify employees of the other signatories to the agreement from and against liability for claims against them by its contractors and subcontractors and the form of agreement that appears at Appendix II to the final rule continues this practice, absent willful misconduct by the individual employee. Therefore, claims against individual employees should be effectively precluded by the waiver of claims agreement, absent the employee's willful misconduct, and further changes to the rule are not necessary to address Sea Launch's suggestion.

Intelsat, a public international organization which owns and operates a global commercial telecommunications network for its members and users, objected to the requirement that parties waive claims ''regardless of fault.'' This language appears in the Agreement currently used by the agency and in the proposed form of agreement set forth in Appendix II to the NPRM to carry out the no-fault reciprocal waiver scheme. Intelsat objected that the language could relieve or insulate a party from its own gross negligence and that the CSLA and its legislative history do not support such an expansive view of the waiver requirement. The comment cites the Fourth Circuit's holding in *Martin Marietta Corporation* v. *International Telecommunications Satellite Organization*, 978 F.2d 140 (4th Cir. 1992); *op. amended*, 991 F.2d 94 (1993), for support of its position. Moreover, Intelsat argued that there is no basis either in the CSLA or its legislative history to support waiving claims regardless of fault, presumably even if that phrase is limited to negligence-based claims.

The agency is troubled by the comment and for the following reasons has determined to retain the ''regardless of fault'' language in the final rule. The FAA understands that the intent of the reciprocal waiver of claims requirement is to relieve launch participants of the threat of inter-party claims for damage or loss. If the waiver of claims did not apply to fault-based claims, and assuming it is not intended to relieve parties of contractual rights and responsibilities for which they have bargained in good faith, then the waiver would be of very little use. The only exception indicated to the statutory risk allocation scheme is for willful misconduct in that the Secretary is not required to provide for payment of excess third-party claims which result from willful misconduct by the licensee and the Government is not relieved of liability under 49 U.S.C. 70112(e) for damage or losses resulting from the Government's willful misconduct or that of its agents.

The Fourth Circuit opinion is not fully dispositive in the agency's opinion. The dispute before the court involved a waiver provision in a launch services contract that pre-dated the 1988 Amendments to the CSLA. The court held that under Maryland state law, parties to a contract cannot waive

liability for gross negligence. The court further opined that even if the 1988 Amendments could apply retroactively to the contract, neither the statutory language nor its legislative history evidences Congressional intent to protect parties from liability for their own gross negligence. 991 F.2d at 100. The Fourth Circuit addressed the issue because the district court, in dismissing a counterclaim alleging gross negligence, had interpreted the waiver of claims requirement of the CSLA as evidence of the intent of the contractual waiver provision. *Martin Marietta Corporation* v. *International Telecommunications Satellite Organization*, 763 F. Supp. 1327 (D. Md. 1991). The Fourth Circuit reversed the district court's holding on the gross negligence counterclaim and remanded it to the district court. A settlement was reached in the latter half of 1993.

Careful examination of the Fourth Circuit's reasoning reveals the following. In construing Maryland state law, the Fourth Circuit relied upon *Boucher* v. *Riner*, 68 Md. App. 539, 514 A.2d 485 (Md. Ct. Spec. App. 1986), which held that a waiver of a right to sue is ineffective to shift the risk of a party's own *willful*, wanton, reckless, or *gross* conduct. 514 A.2d at 488. (Emphasis added.) It appears from the court's holding that Maryland may be among those states that tend to blur the distinction between gross negligence and willful misconduct.

The Court of Appeals for the District of Columbia defines the standard for finding willful misconduct differently than that for gross negligence. To prove willful misconduct, there must be a showing of intent, that is, that an act was intentionally performed with the knowledge that it was likely to result in injury, or with reckless and wanton disregard of the probable consequences of the act. *Saba* v. *Compagnie Nationale Air France*, 78 F.3d 664, 316 U.S. App. D.C. 303 (D.C. Cir. 1996). In *Saba*, the court described a ''continuum that runs from simple negligence through gross negligence to intentional misconduct. Recklessness, or reckless disregard, lies between gross negligence and intentional harm,'' *78 F.3d at 668*. According to the court's opinion, willful misconduct and reckless disregard are equivalent in that reckless disregard evidences the subjective knowledge of the likely consequences of an act and thereby fulfills the requirement to show the requisite intent.

The issue before the court in *Saba* was whether the facts presented amounted to willful misconduct, thereby avoiding the limitation of liability provisions of the Warsaw Convention. In maintaining a higher standard for willful misconduct than for negligence, gross or otherwise, the court stated:

> It is not all that easy to avoid the Convention's limitations by establishing willful misconduct (or reckless disregard). But the signatories obviously thought the economics of air travel, and therefore the overall welfare of passengers, dictated those limitations. It simply will not do for courts to chip away at that liability limit out of a natural desire to remedy the negligence that can be all too apparent in any individual case.

78 F.3d at 671.

Jurisdictions that equate the standard for gross negligence with that of willful misconduct could effectively undo the congressional intent underlying the reciprocal waiver of claims requirement and thereby have more far reaching consequences on the economics of launch services than Congress intended in enacting the comprehensive risk allocation provisions of the 1988 Amendments.

That said, the question before the agency is whether it has the authority to resolve, as a matter of federal law, whether claims between a launch licensee and its customer for gross negligence are necessarily removed from the statutory inter-party waiver scheme when Congress has indicated its intended purpose is to limit the total universe of claims that might arise as a result of a launch and maximize the coverage of available insurance resources by avoiding the costs of duplicate litigation between the parties. S. Rep. No. 100–593, 100th Cong., 2d Sess. 14 (1988). The FAA declines to presume this authority.

Under the agency's current implementation of the statutory-based risk allocation scheme, the only exclusion expressly provided is for willful misconduct and this is consistent with views recently expressed by the Air Force in revising its commercialization agreement. Absent legislative clarification otherwise, and for the reasons expressed in the NPRM of July 25, 1996 (61 FR 39013), the final rule retains the regardless of fault language.

Two commenters, Orbital Sciences and McDonnell Douglas, objected to the proposed form of agreement for waiver of claims in Appendix II to the NPRM in that it does not contain a provision requiring the Government to flow down, or extend, the waiver provisions to its contractors and subcontractors. The comment overlooks that the definition of ''United States Government'' in the proposed form of agreement includes Government contractors and subcontractors; hence there would be no need to flow down the waiver requirement. In this regard, the NPRM proposed a deviation from the agency's current practice. The form of reciprocal waiver agreement presented in Appendix II of the final rule reverts to the approach used in current practice whereby the FAA signs on behalf of the United States and its agencies involved in licensed launch activities and agrees to pass to its contractors and subcontractors the limited agreement and assumption of responsibility assumed by the Government in the reciprocal waiver agreement.

Lockheed Martin expressed concern with the qualifying language appearing in § 440.17(d) of the NPRM and reflected in paragraph 5(c) of the proposed form of agreement in Appendix II as to the need for additional legislation to support the indemnification agreement by the Government to other launch participants for failure to implement properly the waiver requirement.

The CSLA directs the Government to waive claims in excess of Government property insurance on behalf of its contractors and subcontractors involved in launch services. In the agency's view, the effect of this waiver requirement is to make the Government responsible for the excess property damage claims of those contractors and subcontractors. Therefore, even if the Government fails to flow down the waiver of claims and assumption of responsibility provisions of the agreement to its contractors and subcontractors, PPLPs will be financially protected from Government contractor and subcontractor property damage claims. In addition, by entering into the reciprocal waiver agreement for its contractors and subcontractors, the Government takes on responsibility to cover losses sustained by employees of the Government's contractors and subcontractors that are not covered by the licensee's liability policy because they exceed the required amount of insurance or are subject to a policy exclusion deemed usual for that type of insurance. Although appropriations must be authorized for this purpose, the CSLA effectively obligates Congress to act to appropriate funds for this express purpose. The form of agreement that appears in Appendix II of this final rule reflects at paragraph 5(c) the hold harmless and indemnification obligation of the United States for claims of its contractors and subcontractors against PPLPs for property damage or loss and responsibility for their employees' losses in excess of required levels of insurance, respectively.

McDonnell Douglas and Orbital Sciences further noted that the proposed form of reciprocal waiver of claims agreement restricts the Government's waiver to property damage claims, whereas the Agreement currently in use refers also to claims of Government employees. The agency's rationale for removing reference to employee claims from the proposed form of agreement presented in the NPRM was that their third-party status removed the need for the Government to accept responsibility for their claims. Upon reconsideration, the FAA has restored to the form of agreement the Government's acceptance of responsibility for uncovered claims of its employees against the other launch participants.

Orbital Sciences, in clarifying remarks, indicated that the approach utilized in the NPRM is particularly awkward where the same entity is both a contractor to the Government and to the launch licensee. The agency agrees and acknowledges that the ability of various entities to wear different hats, including the Government when it is both range services provider and launch customer, complicates the reciprocal waiver of claims scheme even further. In the agency's view, the capacity in which a party was functioning when the claim arose will determine the rights and responsibilities of the various parties to the waiver agreement.

In discussions unrelated to this rulemaking, the agency has been asked whether cross-waivers of claims are required between a licensee or customer and its contractors and subcontractors given that the form of reciprocal waiver agreement currently in use does not appear to require them. The CSLA intends for parties to enter into such agreements with their contractors and subcontractors and this requirement appears in § 440.17(b) of the final rule. However, the FAA leaves it to those entities to carry out the requirement as part of their contract negotiations. As a regulatory matter, the FAA has been primarily concerned with ensuring that parties not otherwise in contractual privity with a licensee or customer are protected from claims by those entities and their contractors and subcontractors. Accordingly, the form of agreement in Appendix II of the final rule does not address waivers between a licensee or customer with its respective contractors and subcontractors.

Finally, reference to the special circumstances of a Government agency customer is removed from § 440.17(c) of the final rule. As indicated previously in the Supplementary Information, necessary modifications to the form of reciprocal waiver of claims agreement utilized when a Government agency is a customer of commercial launch services will be addressed on an individual basis.

Section 440.19—United States Payment of Excess Third-Party Liability Claims

Section 440.19 of the final rule provides in a regulation general procedures for implementing the statutory payment of excess claims provisions of 49 U.S.C. 70113. The issue that generated the most comments on this proposed section of the regulations concerns the determination of ''usual'' exclusions. Where an exclusion is considered usual for the type of insurance involved, the Secretary may provide for paying uncovered third-party claims from the first dollar of loss and will likewise waive claims for Government property damage from the first dollar of loss. In the section-by-section analysis of the NPRM, the agency explained that it does not make a final determination on what may be considered a usual exclusion upon submission of insurance certificates in advance of licensed launch activities. This determination would be made if and when the agency is required to prepare a compensation plan to cover excluded claims. The NPRM proposed a reasonable cost standard for determining whether an exclusion may be deemed ''usual.''

Lockheed Martin, McDonnell Douglas and Orbital Sciences, as well as Sea Launch objected to the after-the-fact approach the agency utilizes in making the determination as to whether an exclusion is usual for the type of insurance, stating that the Government has an obligation to do so in advance of licensed launch activities in order to afford licensees some measure of certainty and predictability in their management of launch risks. Marsh & McLennan similarly stated that the government should not wait for a loss to occur before making its determination and should do so before commencement of launch activities. Lockheed Martin, McDonnell Douglas and Orbital Sciences objected to using a reasonable cost standard for determining whether insurance could have been provided to cover the excluded risk. The notion of ''buying out'' an exclusion is viewed by these commenters as objectionable because of the unpredictability and fluctuation of the insurance market. This approach does not comport with the CSLA, according to the commenters, which is intended to promote a predictable and stable environment in which the commercial launch industry can operate.

The agency is troubled by the suggestion implicit in the commenters' views that the proposed requirement imposes additional burdens and uncertainty on the industry and that the Government should accept both this burden and uncertainty. As a practical matter, the industry is, or ought to be, in the best position to know whether insurance coverage is available to address the risks that attend its hazardous business. It is not unreasonable for the Government to expect the industry, as part of prudent risk management practices, to keep abreast of the insurance market, its capacity and the availability of insurance to cover the risks that confront this industry.

When a launch licensee submits an insurance certificate evidencing various exclusions, in essence, the licensee is representing to the agency that the exclusion is usual for that type of insurance under prevailing market conditions, otherwise coverage for that risk would have been obtained. If the industry wants to obtain a formal finding from the agency it can submit factual data, such as cost information and market data, in support of an assertion that an exclusion should be deemed usual either because the coverage simply is not available or because it is cost prohibitive. Absent such proofs, the agency should not be required to insure or guarantee the industry's representation that insurance is not available at reasonable cost. The agency is considering whether a future rulemaking to better define ''usual'' exclusions would be desirable but is reluctant to effectively waive insurance coverage for certain risks thereby foreclosing the development of new insurance markets that might respond to those risks.

The agency also wishes to stress that it currently does not make findings that an exclusion is usual upon submission of insurance certificates in advance of licensed launch activities even though the agency does question, and may request correction of, representations that do not appear to comply with license order requirements. Acceptance by the agency of a licensee's insurance certificate does not signify a finding by the agency as to the sufficiency of the coverage.

Consistent with naming employees of PPLPs as additional insureds under § 440.9(b), § 440.19(a) is revised in this final rule to reflect that excess third-party claims against an employee of any launch participant that is an additional insured under the liability policy would also be eligible for payment by the Government under 49 U.S.C. 70113,

absent willful misconduct by that employee.

Statutory Authority for This Proposed Rule

This final rule is issued pursuant to 49 U.S.C. Subtitle IX, ch. 701—Commercial Space Launch Activities, §§ 70101–70119, formerly the Commercial Space Launch Act of 1984 (CSLA), as amended (49 U.S.C. App. 2601–2623). In 1988, Congress amended the CSLA by replacing general insurance requirements with a detailed financial responsibility and allocation of risk regime for licensed operations. The provisions, referred to as the 1988 Amendments, include procedures whereby the United States Government requires risk-based insurance to compensate for third-party liability and Government property damage claims, waives certain claims for its property damage and, subject to an appropriation law or other legislative authority, agrees to provide for payment of third-party claims in excess of required liability insurance. In addition, the 1988 Amendments require launch participants to enter into reciprocal waivers of claims in which the parties agree to absorb certain losses and the private party launch participants agree to be responsible for claims of their employees for damage or loss.

The agency has been implementing the 1988 Amendments on a case-by-case basis, through license orders issued with each license authorizing commercial space launch activities. In this final rule, the agency standardizes financial responsibility requirements in rules of general applicability, wherever practicable.

Paperwork Reduction Act

Information collection requirements in the new part 440 have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), and have been assigned OMB Control # 2120–0601.

Regulatory Evaluation Summary

Issuance of Federal regulations is subject to several economic analyses. First, Executive Order 12866 directs that agencies shall propose or adopt a regulation only upon a determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic effect of regulatory changes on small entities. Third, the Office of Management and Budget (OMB) directs agencies to assess the effect of regulatory changes on international trade. In addition, under Regulatory Policies and Procedures of the Department of Transportation (44 FR 11034; February 26, 1979), this rule is considered significant because there is substantial public interest in the rulemaking. The FAA certifies that this rule will not have a significant impact on a substantial number of small entities and will not constitute a barrier to international trade. The FAA invited the public to provide comments, including supporting data on the assumptions made in the draft regulatory evaluation during the comment period. All comments received were considered in the final regulatory evaluation. This rule has been reviewed by OMB under Executive Order 12866.

Economic Impacts

This final rule formalizes the procedures for implementing financial responsibility requirements imposed on commercial space launch licensees by the Commercial Space Launch Act of 1984, as amended in 1988. These requirements have essentially been implemented so this rule does not change present practice. The rule will provide launch licensees (i.e., commercial launch operators) with clear and reliable information on the financial responsibility requirements they must meet to carry out licensed activities. To provide some perspective, this evaluation estimates the financial responsibility costs on both the commercial space industry and the U.S. Government as a result of the 1988 Amendments to the CSLA.

The FAA estimates that, based in part upon an analysis by Princeton Synergetics Inc.[1] (PSI), as a consequence of the U.S. Government's assumption of exposure up to $1.5 billion (as adjusted for inflation occurring after January 1, 1989) for third-party claims, the 1988 Amendments will result in the maximum reallocation of costs from licensees to the Federal government in the range of $21,000 to $37,000 undiscounted or $18,200 to $30,300 discounted over a five-year period. The actual economic impact on a licensee is small and not quantifiable because the increase in the risk of bearing the costs of injury or loss of life to third parties due to the ''redefinition'' of Government employees is estimated to be ''de minimus'' and could not be calculated. The administrative or paperwork cost to the Federal Government associated with FAA's responsibilities under the 1988 Amendments is estimated at $884,000 undiscounted or $725,000 discounted over five years. The paperwork cost estimate is an upper bound and it is believed that the actual costs are substantially lower. Given current practice, these costs will be reduced to $606,000 undiscounted or $414,000 discounted. The additional paperwork costs incurred by the licensees in complying with the requirements for reciprocal waivers is expected to be negligible.

The final rule should result in a stronger, more stable, commercial space transportation industry. The reciprocal waiver provisions of the final rule should lower the costs of litigation among private party launch participants in licensed activities. The benefit of transferring expected costs of damage and loss or injury claims from the licensees to the government will aid the commercial space transportation industry by eliminating the need to insure for these claims and by showing support for the commercial space transportation industry by the U.S. Government. Also, limiting risk based on maximum probable loss (MPL) should result in greater certainty for potential costs (and resulting lower business risk) to commercial space transportation firms. Finally, the requirement for cross-waivers limits the risk of liability to others in licensed activities (other than the licensee) and results in a more certain business environment (or lower business risk) for these parties.

Regulatory Flexibility Analysis

The Regulatory Flexibility Act of 1980 (RFA), as amended, was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by Government regulations. The Act requires that whenever an agency publishes a general notice of proposed rulemaking, an initial regulatory flexibility analysis identifying the economic impact on small entities, and considering alternatives that may lessen those impacts must be conducted if the proposed rule would have a significant economic impact on a substantial number of small entities.

The FAA issued a notice of proposed rulemaking on July 25, 1996 (61 FR 38992) soliciting comments on its proposal for implementing financial responsibility and allocation of risk requirements. As a result, eight comments were submitted to the docket. Several events following the close of the comment period on December 2, 1996 resulted in a decision to reopen the

[1] The basis for this analysis is Contract DTOS–59–59 by Princeton Synergetics Inc. (PSI) entitled: *Economic Impact Assessment of Financial Responsibility Requirements for Licensed Launch Activities (14 CFR Part 440).* Princeton, New Jersey. March 16, 1998.

docket in order to allow industry another opportunity to offer views on the content of the proposed rule. There were no significant issues raised by public comments in response to the regulatory flexibility certification.

The FAA has estimated that an average of four launch licenses per year will be issued. The vast majority of these licenses will be issued to companies like Lockheed Martin Corporation, Orbital Sciences Corporation, McDonnell Douglas Corporation, now The Boeing Company. There are a number of firms (probably fewer than 10) that are currently attempting to enter the space launch services business by developing both advanced expendable and reusable launch vehicles. Perhaps 50 to 75 percent of these may be considered small business entities in that they are start-up situations though typically having large capitalizations. Thus, the universe of small entities that may be concerned with the provision of space launch services and that may be potentially affected by this financial responsibility rulemaking is on the order of 5 to 10.

The regulatory evaluation states that over five years, the change in the expected cost of claims to licensees will be a cost savings of between $21,000 and $37,000 or between $17,200 and $30,300 discounted. The annualized cost savings to all of these firms will be between $4,200 and $7,400. If four licenses are issued annually, then the annualized cost savings per license would be less than $2,000 per license. As previously stated, the final rule results from the financial responsibility requirements imposed by the Commercial Space Launch Act of 1984, as amended. This final rule formalizes current practice. The FAA concludes that this regulation will impose little or no cost or cost savings on this industry, and certifies that it will not have a significant economic impact on a substantial number of small entities.

International Trade Impact Assessment

This final rule is not expected to have any impact on trade opportunities for U.S. firms doing business overseas or foreign firms doing business in the United States.

Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (the Act), enacted as Pub. L. 104–4 on March 22, 1995, requires each Federal agency, to the extent permitted by law, to prepare a written assessment of the effects of any Federal mandate in a proposed or final agency rule that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more (adjusted annually for inflation) in any one year. Section 204(a) of the Act, 2 U.S.C. 1534(a), requires the Federal agency to develop an effective process to permit timely input by elected officers (or their designees) of State, local, and tribal governments on a proposed ''significant intergovernmental mandate.'' A ''significant intergovernmental mandate'' under the Act is any provision in a Federal agency regulation that will impose an enforceable duty upon State, local, and tribal governments, in the aggregate, of $100 million (adjusted annually for inflation) in any one year. Section 203 of the Act, 2 U.S.C. 1533, which supplements section 204(a), provides that before establishing any regulatory requirements that might significantly or uniquely affect small governments, the agency shall have developed a plan that, among other things, provides for notice to potentially affected small governments, if any, and for a meaningful and timely opportunity to provide input in the development of regulatory proposals.

This final rule does not contain a Federal intergovernmental or private sector mandate that exceeds $100 million a year. Therefore, the requirements of Title II of the Unfunded Mandates Reform Act of 1995 do not apply.

Federalism Implications

This final regulation would not have substantial direct effects on the states, on the relationship between the Federal Government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final regulation does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

List of Subjects in 14 CFR Part 440

Armed forces, Federal buildings and facilities, Government property, Indemnity payments, Insurance, Reporting and recordkeeping requirements, Space transportation and exploration.

The Amendment

In consideration of the foregoing, the Associate Administrator for Commercial Space Transportation, Federal Aviation Administration amends the Commercial Space Transportation Licensing Regulations, 14 CFR Ch. III, as follows:

1. Subchapter C of Chapter III, Title 14, Code of Federal Regulations, is amended by adding a new Part 440 to read as follows:

PART 440—FINANCIAL RESPONSIBILITY

Subpart A—Financial Responsibility for Licensed Launch 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 launch activities.
440.11 Duration of coverage; Modifications.
440.13 Standard conditions of insurance coverage.
440.15 Demonstration of compliance.
440.17 Reciprocal waiver of claims requirement.
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 launch activities
Appendix B to Part 440—Assignment for waiver of claims and assumption of responsibility

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

§ 440.1 Scope of part.

This part sets forth financial responsibility and allocation of risk requirements applicable to commercial space launch activities that are authorized to be conducted under a launch license issued pursuant to this subchapter.

§ 440.3 Definitions.

(a) For purposes of this part—

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

(2) *Contractors and subcontractors* means those entities that are involved at any tier, directly or indirectly, in licensed launch activities, and includes suppliers of property and services, and the component manufacturers of a launch vehicle or payload.

(3) *Customer* means the person who procures launch services from the licensee, any person to whom the customer has sold, leased, assigned, or otherwise transferred its rights in the payload (or any part thereof) to be launched by the licensee, including a conditional sale, lease, assignment, or transfer of rights, any person who has placed property on board the payload for launch or payload services, and any person to whom the customer has

transferred its rights to the launch services.

(4) *Federal range facility* means a Government-owned installation at which launches take place.

(5) *Financial responsibility* means statutorily required financial ability to satisfy liability as required under 49 U.S.C. 70101–70119.

(6) *Government personnel* means employees of the United States, its agencies, and its contractors and subcontractors, involved in launch services for licensed launch activities. Employees of the United States include members of the Armed Forces of the United States.

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

(8) *Liability* means a legal obligation to pay claims for bodily injury or property damage resulting from licensed launch activities.

(9) *License* means an authorization to conduct licensed launch activities, issued by the Office under this subchapter.

(10) *Licensed launch activities* means the launch of a launch vehicle as defined in a regulation or license issued by the Office and carried out pursuant to a launch license.

(11) *Maximum probable loss (MPL)* means the greatest dollar amount of loss for bodily injury or property damage that is reasonably expected to result from licensed launch activities;

(i) Losses to third parties, excluding Government personnel and other launch participants' employees involved in licensed launch activities, that are reasonably expected to result from licensed launch activities are those having a probability of occurrence on the order of no less than one in ten million.

(ii) Losses to Government property and Government personnel involved in licensed launch activities that are reasonably expected to result from licensed launch activities are those having a probability of occurrence on the order of no less than one in one hundred thousand.

(12) *Office* means the Associate Administrator for Commercial Space Transportation of the Federal Aviation Administration, U.S. Department of Transportation.

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

(14) *Regulations* means the Commercial Space Transportation Licensing Regulations, codified at 14 CFR Ch. III.

(15) *Third party* means:

(i) Any person other than:

(A) The United States, its agencies, and its contractors and subcontractors involved in launch services for licensed launch activities;

(B) The licensee and its contractors and subcontractors involved in launch services for licensed launch activities; and

(C) The customer and its contractors and subcontractors involved in launch services for licensed launch activities.

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

(16) *United States* means the United States Government, including its agencies.

(b) Except as otherwise provided in this section, any term used in this part and defined in 49 U.S.C. 70101–70119, or in § 401.5 of this chapter shall have the meaning contained therein.

§ 440.5 General.

(a) No person shall commence or conduct launch activities that require a license unless that person has obtained a license and fully demonstrated compliance with the financial responsibility and allocation of risk requirements set forth in this part.

(b) The Office shall prescribe the amount of financial responsibility a licensee is required to obtain and any additions to or modifications of the amount in a license order issued concurrent with or subsequent to the issuance of a license.

(c) Demonstration of financial responsibility under this part shall not relieve the licensee of ultimate responsibility for liability, loss, or damage sustained by the United States resulting from licensed launch activities, 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) Covered claims of third parties for bodily injury or property damage arising out of any particular launch exceed the amount of financial responsibility required under § 440.9(c) of this part and do not exceed $1,500,000,000 (as adjusted for inflation occurring after January 1, 1989) above such amount, and are payable pursuant to 49 U.S.C. 70113 and § 440.19 of this part. Claims of employees of entities listed in § 440.3(a)(15)(i)(B) and (C) of this part for bodily injury or property damage are not covered claims;

(3) Covered claims for property loss or damage exceed the amount of financial responsibility required under § 440.9(e) of this part and do 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 that exceed $1,500,000,000 (as adjusted for inflation occurring after January 1, 1989) above the amount of financial responsibility required under § 440.9(c) of this part.

(d) A licensee's failure to comply with the requirements in this part may result in suspension or revocation of a license, and subjects the licensee to civil penalties as provided in part 405 of this chapter.

§ 440.7 Determination of maximum probable loss.

(a) The Office shall 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 licensed launch activities. The maximum probable loss determination forms the basis for financial responsibility requirements issued in a license order.

(b) The Office issues its determination of maximum probable loss no later than ninety days after a licensee or transferee has requested a determination and submitted all information required by the Office to make the determination. The Office shall 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, licensed launch activities before issuing a license order prescribing financial responsibility requirements and shall notify the licensee or transferee if interagency consultation may delay issuance of the MPL determination.

(c) Information requirements for obtaining a maximum probable loss determination are set forth in Appendix A of this part. Any person requesting a determination of maximum probable loss must submit information in accordance with Appendix I requirements, unless the Office has waived requirements. 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 shall promptly report any changes in writing.

(d) The Office shall amend a determination of maximum probable

loss required under this section at any time prior to completion of licensed launch activities as warranted by supplementary information provided to or obtained by the Office 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 order.

(e) The Office 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 launch activities.

(a) As a condition of each launch license, the licensee must comply with insurance requirements set forth in this section and in a license order issued by the Office, or otherwise demonstrate the required amount of financial responsibility.

(b) The licensee must obtain and maintain in effect a policy or policies of liability insurance, in an amount determined by the Office 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 licensed launch activities:

(1) The licensee, its customer, and their respective contractors and subcontractors, and the employees of each, involved in licensed launch activities;

(2) The United States, its agencies, and its contractors and subcontractors involved in licensed launch activities; and

(3) Government personnel.

(c) The Office shall prescribe for each licensee the amount of insurance required to compensate the total of covered third-party claims for bodily injury or property damage resulting from licensed launch activities in connection with any particular launch. Covered third-party claims include claims 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 Office'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 Office.

(d) The licensee must obtain and maintain in effect a policy or policies of insurance, in an amount determined by the Office under paragraph (e) of this section, that covers claims by the United States, its agencies, and its contractors and subcontractors involved in licensed launch activities for property damage or loss resulting from licensed launch activities. 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 licensed launch activities, at a Federal range facility. Insurance must protect the United States and its agencies, and its contractors and subcontractors involved in licensed launch activities.

(e) The Office shall prescribe for each licensee the amount of insurance required to compensate claims for property damage under paragraph (d) of this section resulting from licensed launch activities in connection with any particular launch. 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 Office.

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

§ 440.11 Duration of coverage; modifications.

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

(1) Until completion of licensed launch activities at the launch site; and

(2) For orbital launches, 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 suborbital launches, until the later of—

(i) Motor impact and payload recovery; or

(ii) The Office's determination that risk to third parties and Government property as a result of licensed launch activities is sufficiently small that financial responsibility is no longer necessary, as determined by the Office through the risk analysis conducted before the launch 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 Office 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 shall comply with the following terms and conditions of coverage:

(1) Bankruptcy or insolvency of an insured, including any additional insured, shall not relieve the 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 licensed launch activities in connection with any particular launch.

(3) Except as provided herein, each policy must pay claims from the first dollar of loss, without regard to any deductible, to the limits of the policy. A licensee 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, available to compensate claims at any time claims may arise.

(4) Each policy shall not be invalidated by any action or inaction of the licensee or any additional insured, including nonpayment by the licensee of the policy premium, and must insure the licensee and each additional insured regardless of any breach or violation of any warranties, declarations, or conditions contained in the policies by the licensee or any additional insured (other than a breach or violation by the licensee or an additional insured, and then only as against that licensee or additional insured).

(5) Exclusions 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 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 and each additional insured.

(8) Each policy must be placed with an insurer of recognized reputation and responsibility that is licensed to do business in any State, territory, possession of the United States, or the District of Columbia.

(9) Except as to claims resulting from the willful misconduct of the United States or 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 must submit evidence of financial responsibility and compliance with allocation of risk requirements under this part, as follows, unless a license order specifies otherwise due to the proximity of the licensee's intended date for commencement of licensed launch activities:

(1) The three-party reciprocal waiver of claims agreement required under § 440.17(c) of this part must be submitted at least 30 days before commencement of licensed launch activities involving the customer that will sign the agreement;

(2) Evidence of insurance must be submitted at least 30 days before commencement of licensed launch activities;

(3) Evidence of financial responsibility in a form other than insurance, as provided under § 440.9(f) of this part, must be submitted at least 60 days before commencement of licensed launch activities; 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 shall preempt any provisions in agreements between the licensee and an agency of the United States governing access to or use of United States launch property or launch services for licensed launch activities which address financial responsibility, allocation of risk and related matters covered by 49 U.S.C. 70112, 70113.

(c) A licensee must demonstrate compliance as follows:

(1) The licensee must provide proof of insurance required under § 440.9 by:

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

(ii) Filing with the Office 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 licensed launch activities, 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) of this part, 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 Office, 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) of this part, executed by the licensee and its customer.

(2) Certifications required under this section must be signed by a duly authorized officer of the licensee.

(d) Certificate(s) of insurance required under 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 complies with the specific requirements for insurance set forth in this part and any applicable license order.

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

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

§ 440.17 Reciprocal waiver of claims requirements.

(a) As a condition of each launch license, the licensee shall comply with reciprocal waiver of claims requirements as set forth in this section.

(b) The licensee shall implement reciprocal waivers of claims with its contractors and subcontractors, its customer(s) and the customer's contractors and subcontractors, under which each party waives and releases claims against the other parties to the waivers 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 licensed launch activities, regardless of fault.

(c) For each licensed launch in which the U.S. Government, its agencies, or its contractors and subcontractors is involved in licensed launch activities or where property insurance is required under § 440.9(d) of this part, the Federal Aviation Administration of the Department of Transportation, the licensee, and its customer shall enter into a three-party reciprocal waiver of claims agreement in the form set forth in Appendix II to this part or that satisfies its requirements.

(d) The licensee, 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.

§ 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 the licensee, the customer, and the contractors and subcontractors of the licensee and the customer, and the employees of each involved in licensed launch activities, and the contractors and subcontractors of the United States and its agencies, and their employees, involved in licensed launch 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:

(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 Office that the total amount of claims arising out of licensed launch 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 Office 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 Office and submitted by the President.

(f) The Office 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 Office 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 Launch Activities

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

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 range facility, including the launch complex on the range, planned date of launch, and launch windows.

6. If the applicant has previously been issued a license to conduct launch activities using the same launch vehicle from the same launch range facility, 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.

D. Flight Termination System.

1. Identification of any flight termination system (FTS) on the launch 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 range 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 launch activities who may be exposed to risk during each operation. For Government personnel, identification of his or her employer.

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

III. Flight Operations

A. Identification of launch range facilities exposed to risk during launch vehicle lift-off and flight.

B. Identification of accident failure scenarios, probability assessments for each, and estimation of risks to Government personnel, individuals not involved in licensed launch 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 launch 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 range 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 who may be exposed to risk during each operation. For Government personnel, identification of his or her employer.

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

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

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'').

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, any person to whom the Customer has sold, leased, assigned, or otherwise transferred its rights in the payload (or any part thereof) to be launched by the licensee, including a conditional sale, lease, assignment, or transfer of rights, any person who has placed property on board the payload for launch or payload services, and any person to whom the Customer has transferred its rights to the launch services.

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 Launch 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 Launch 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 Launch 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 Launch 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, 14 CFR 440.9(c) and (e).

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 Launch 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 Launch 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 Launch 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 section 440.9(c) and (e), respectively, of the Regulations, 14 CFR 440.9(c) and (e).

4. Extension of Assumption of Responsibility and Waiver

(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 Launch 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 Launch 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 Launch 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 section 440.9(c) and (e), respectively, of the Regulations, 14 CFR 440.9(c) and (e).

5. Indemnification

(a) Licensee shall hold harmless and indemnify Customer and its directors, officers, servants, agents, subsidiaries, employees and assignees, or any or them, and the United States and its agencies, servants, agents, subsidiaries, employees and assignees, or any or 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 Launch Activities.

(b) Customer shall hold harmless and indemnify Licensee and its directors, officers, servants, agents, subsidiaries, employees and assignees, or any or 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 Launch 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 Launch 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, 14 CFR 440.9(c) and (e).

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 Launch 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 (14 CFR 440.9(e)); (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 (14 CFR 440.9(c)), 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 (14 CFR 440.19); 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 (14 CFR 440.9(c)).

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 Launch 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 Launch 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: _____

DEPARTMENT OF TRANSPORTATION

Issued in Washington, DC, on August 18, 1998.

Patricia Grace Smith,

Associate Administrator for Commercial Space Transportation, Federal Aviation Administration.

[FR Doc. 98–22728 Filed 8–25–98; 8:45 am]

BILLING CODE 4910–13–P