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LOCKHEED MARTIN



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FAA-00-7953-19

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U.S. DEPARTMENT OF TRANSPORTATION

April 23, 2001

Docket Management System  
U.S. Department of Transportation  
Room Plaza 401  
400 Seventh Street, SW  
Washington, D.C. 20590-0001

Re: Notice of Proposed Rulemaking on Licensing and Safety Requirements for Launch (Docket Number FAA-2000-7953; Notice No. 00-10)

To Whom It May Concern:

On behalf of Lockheed Martin Corporation ("LMC"), I am enclosing two copies of comments in response to the Federal Aviation Administration ("FAA") Notice of Proposed Rulemaking ("NPRM") on Licensing and Safety Requirements for Launch, which was published in the *Federal Register* at 65 Fed. Reg. 63,922 on October 25, 2000. The comments include as a separate document our Cost Impact Analysis. I also am enclosing an additional copy of this letter to be date stamped and returned to our waiting messenger as proof of filing.

Please note that we have marked our Cost Impact Analysis "privileged and confidential," as it contains proprietary and sensitive financial and commercial information the public release of which likely would cause substantial competitive harm to LMC. Consequently, we specifically request that all aforementioned privileged and confidential information not be placed in the public docket. Rather, we request that the Department of Transportation ("DOT") and FAA safeguard the information and place it in a file to which there is no public disclosure or access.

The Freedom of Information Act ("FOIA"), 5 U.S.C. § 552(b)(4), and DOT implementing regulations 49 C.F.R. § 7.13(c)(4), specifically exempt from disclosure records relating to "trade secrets and commercial or financial information obtained from a person and privileged or confidential." Therefore, should the FAA or DOT receive a request filed under FOIA for any or all of LMC's proprietary information submitted in response to the NPRM, we expect that DOT procedures set forth in 49 C.F.R. Part 7 generally and 49 C.F.R. § 7.17 specifically shall be diligently followed and that we shall be given the maximum days notice to respond to any FOIA request and to pursue our legal rights and remedies to protect our competition sensitive information.

Any questions or requests for further information regarding LMC's request for confidential treatment can be directed to my attention.

Sincerely,

Handwritten signature of Elaine David in cursive script.  
Elaine David

**Before the  
FEDERAL AVIATION ADMINISTRATION  
Washington, D.C. 20591**

In the matter of	)	
	)	Docket No. FAA 2000-7953
Licensing and Safety	)	Notice No. 00-10
Requirements for Launch	)	

**COMMENTS OF LOCKHEED MARTIN CORPORATION**

Lockheed Martin Corporation ("LMC") hereby submits the following comments in response to the Notice of Proposed Rulemaking ("NPRM") on Licensing and Safety Requirements for Launch, issued on October 25, 2000, by the Federal Aviation Administration ("FAA"), Office of the Associate Administrator for Commercial Space Transportation (the "Office"). LMC also submits herewith our Cost Impact Analysis, which documents the costs of compliance with the proposed regulations set forth in the NPRM and the impact of these costs on Lockheed Martin Astronautics's launch business. LMC requests privileged and confidential treatment for its Cost Impact Analysis due to the business proprietary nature and competitive sensitivity of the contents of that document.<sup>1</sup> In addition to our own comments, LMC joins with The Boeing Company, International Launch Services, Orbital Sciences Corporation and Sea Launch Company in the submission today of the Consolidated Industry Response to the NPRM.

**I. INTRODUCTION**

LMC is the world's largest provider of space transportation hardware and services, and a major supplier of civil, military and commercial spacecraft providing communications, remote sensing, global positioning and scientific services and capabilities to public and private sector customers worldwide.

Commercial Titan and Atlas launches provided by our heritage Martin Marietta and General Dynamics companies were among the first to be carried out pursuant to licenses issued by the Office's predecessor, the Office of Commercial Space Transportation ("OCST"), pursuant to its authority under the Commercial Space Launch Act of 1984, as amended (the "CSLA" or the "Act").<sup>2</sup> Moreover, both companies played large, active roles in the process whereby the CSLA was initially enacted in 1984, amended in 1988, and subsequently implemented through reliance, in part, on the concept of a launch operator's license. Today, launch operations using LMC's commercial Atlas and Athena families of launch vehicles are conducted regularly pursuant to licenses issued by the Office. To date, almost all of these launches have been conducted at federal launch ranges either on the West Coast at Vandenberg Air Force Base or on the East Coast at Cape Canaveral Air Station. Pursuant to our licenses for launches from federal ranges, we operate in accordance with all safety requirements imposed by the Air Force through the document known as Eastern and Western Range 127-1, as tailored ("EWR 127-1"). LMC's

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<sup>1</sup> 5 U.S.C. § 552(b)(4). *See also*, LMC's cover letter to this submission.

<sup>2</sup> 49 U.S.C. §§ 70101-21.

excellent safety record is evidence of the thoroughness and efficacy, both as drafted and as implemented, of EWR 127-1, and LMC continues to support compliance with EWR 127-1 as the over-arching safety-related requirement of a launch license.

LMC submits that the proposal set forth in the NPRM to supplement and take precedence over EWR-127-1 with new regulations for commercial launch operations at Federal ranges would change fundamentally the nature of the launch safety regime at U.S. Government ranges in a way that would have a severe negative impact on our costs and our operations, and impair our ability to remain internationally competitive. LMC firmly believes that such a result would be contrary to the letter and spirit of the CSLA, and would undermine longstanding national economic and security interests associated with US space transportation capabilities. LMC, as an experienced licensed launch operator from federal launch ranges, appreciates this opportunity to share with the Office its views on issues critical to the continued viability of our launch services business.

## II. DISCUSSION

Regulations are promulgated to give full effect to the policy objectives embodied in an agency's statutory grant of authority.<sup>3</sup> Since the Congress enacted the CSLA in 1984, the Office, and the OCST before it, has promulgated regulations that, consistent with the CSLA's mandate, were intended to advance the full range of important U.S. national interests related to commercial launch activity and, in particular, the need for industry to operate safely and maintain a strong U.S. competitive stance in the global marketplace. To date, the Office has met its statutory responsibility to encourage, facilitate and promote, the US commercial launch industry by, *inter alia*, regulating the industry only to the extent necessary to ensure public safety and the national security and foreign policy interests of the United States.<sup>4</sup>

In the case of the NPRM, however, the proposed new launch safety requirements would not further the objectives of the CSLA. The CSLA mandate to protect the public is currently met quite effectively through the requirement that licensees comply with EWR 127-1. The Office has the authority to issue new safety-related regulations, including one that would supplement and take precedence over EWR-127-1 for purposes of commercial launch activity. However, the Office also has the statutory responsibility to ensure that any such new regulations are a clear and significant improvement on the *status quo* both from the standpoint of protecting public safety and imposing costs on industry. The regulatory approach taken by the Office in the NPRM would not in any way be an improvement on the *status quo*. Rather, the proposed requirements would be burdensome and duplicative, and result in seriously adverse cost and operational impacts. Compliance with the NPRM's safety requirements would impede the industry's ability to compete in the international marketplace and to maintain its commercial viability, without providing an accompanying benefit to the public. Regardless of action taken by the Office with respect to safety standards for commercial launches, the requirements of EWR 127-1, which are well-proven as effective measures for protecting public safety, will remain for all launches LMC performs. As a consequence the Office's proposed approach could result in conflicting and

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<sup>3</sup> *Porter v. Prudential Insurance Company of America*, 470 F. Supp. 203, 206 (1979), quoting *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 213-214 (1976), and *United States v. Larionoff*, 431 U.S. 864, 873 (1977)

<sup>4</sup> CSLA at §§ 70101(a)(7) and 701013(b)(1).

confusing standards, which, at best, may have a chilling effect on development of new technologies and, at worst, compromise the efficiency of safety-related oversight at the federal ranges for years.

#### **A. The Proposed Regulations Would Result in Duplicative and Conflicting Requirements**

Over the past four decades of launching expendable launch vehicles from federal ranges, LMC and the other principal U.S. launch operators have gone to great lengths and expended significant sums of money to ensure that our launch vehicles and launch operations comply with EWR 127-1. EWR 127-1 is largely comprised of highly detailed, design-oriented requirements.

Compliance with these requirements has entailed costly tailoring of each space booster system that flies from the ranges. Our analysis of the NPRM indicates that the Office is proposing requirements that are even more detailed than the existing EWR 127-1 and will also necessitate considerable tailoring. At the same time, the Air Force has been in the process of revising EWR 127-1, a revision that has only within the week been made available for industry review and comment.<sup>5</sup>

LMC is greatly concerned about the effects on the industry of the development and application of two separate and distinct sets of launch safety requirements – one by the FAA and the other by the Air Force. The Office has tried to allay LMC’s concerns with assurances that “common” standards will be codified in the FAA’s regulations and that Air Force’s implementation of these common standards as they apply to government launches from Air Force ranges will be reflected in EWR 127-1 or its successor.<sup>6</sup> However, it is self-evident that there will be many standards that are not common to both documents. Consequently, LMC faces the real and troublesome prospect of having FAA regulations and Air Force requirements that differ significantly, but are effective at the same time, for the same launch system, at the same launch facility, addressing the same safety concerns. Even those standards that are common to both sets of requirements will be subject to the unique interpretation and implementation methods of each of these two oversight authorities – the FAA and the Air Force.

There is a significant difference in the way compliance with and enforcement of an operating agency’s technical requirements are carried out, in contrast to legal requirements promulgated by a regulatory agency. The Office has indicated that it is merely “codifying” EWR-27-1. Even if that were to be the extent of the regulatory action taken by the Office, the result would be very troubling: while EWR-27-1 sets forth detailed safety “requirements,” the Air Force, in fact, implements these requirements quite flexibly (as, in effect, detailed guidance), allowing operators to “tailor” individual practical approaches to meeting public safety standards. Operators, including commercial launch licensees, must ultimately demonstrate their ability to meet these standards, which are the real, ultimate requirements that must be met both for Air Force and for FAA licensing purposes. The NPRM would largely eliminate the flexibility inherent in the Air Force approach to its safety “requirement,” by making them true regulatory

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<sup>5</sup> LMC is in the process of reviewing and analyzing the Air Force’s proposed revisions to EWR 127-1 and will be submitting comments on these revisions in accordance with the Air Force’s request. We will provide a copy of our comments to the Office for its reference and consideration once they are completed.

<sup>6</sup> Letter from Patti Grace Smith, Associate Administrator for Commercial Space Transportation, to G. Thomas Marsh, President of Lockheed Martin Astronautics, dated April 16, 2001.

requirements having the force of law. Moreover, the NPRM would also eliminate the pragmatic “tailoring” approach to implementation, and replace it with a strict “clear and convincing” legal standard for giving approval for alternate practical approaches to achieving safety compliance. The NPRM would thus replace a flawed, but flexible and workable, arrangement with a mandatory regime of rigid, burdensome, and costly design regulations having the force of law.

## **B. The Proposed Regulations Would Have Serious, Negative Cost and Operational Impacts**

Contrary to the Office's assertion that the NPRM is cost-justified,<sup>7</sup> LMC, and the larger U.S. launch industry, find that the safety requirements set forth in the NPRM will significantly increase the regulatory burden, and the associated costs, imposed on the U.S. space launch industry. This finding is substantiated by data collected, analyzed and reported in response to the NPRM jointly and individually by the major U.S. launch services providers. Both the Consolidated Industry Response and LMC's own Cost Impact Analysis testify to the technical, operational, legal and financial impacts of the proposed regulations on our launch operations.

The Consolidated Industry Response sets forth the participating companies' preliminary estimates indicating a collective impact to the major U.S. launch services providers that *ranges from \$500 million to \$1 billion* over a period of five years. LMC's Cost Impact Analysis, which we incorporate herein by reference, provides our own detailed estimates of the cost of implementation of the requirements proposed in the NPRM. The LMC-specific findings are equally striking.<sup>8</sup> The substantial cost increases documented in both these assessments result from, among other factors, increased design requirements, additional analyses, more conservative approaches to flight constraints, the potential requirement to re-verify that existing components or processes meet standards established by the NPRM (although they already qualify under EWR 127-1) and the requirement to demonstrate compliance to two different governmental agencies.

Substantial increases in the costs of regulatory compliance will have a critical impact on LMC and the U.S. launch services industry more broadly. Margins in the industry have dropped significantly over the past several years as an increase in the supply of launch services available and a decrease in demand for those launch services have caused market prices to drop. Increased costs may further reduce margins and affect the commercial viability of some U.S. launch services providers. Additionally, cost increases specific to launches in the United States will undercut the ability of U.S. launch services providers to compete internationally. U.S. launch services providers face strong competition from foreign rivals, some of which benefit from significant levels of government support. Cost increases affecting only launches in the United States will further weaken the competitive position of U.S. launch services providers, and send customers of U.S. launch services off-shore for a better deal.

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<sup>7</sup> NPRM at 63,963.

<sup>8</sup> For proprietary reasons, LMC-specific dollar amounts are not disclosed in this section of the LMC comments. Instead, they are set forth in significant detail in our Cost Impact Analysis, which LMC has marked privileged and confidential and for which we have requested exemption from public disclosure under the Freedom of Information Act due to the proprietary and competition sensitive commercial and financial information contained therein.

In addition to cost impact, the NPRM as drafted would impose significant increased operational burdens on LMC and other U.S. launch services providers.<sup>9</sup> For example, compliance with the requirements set forth in the NPRM would demand an extraordinarily high level of detail for design, testing, analysis and operations. LMC submits that this level of detail is unnecessary, inappropriate and ultimately counter-productive. First, it is unnecessary when considering that U.S. launch services providers already have established an excellent safety record through compliance with EWR 127-1. Second, it is inappropriate – not to mention unwieldy and unrealistic – to try to apply detailed but uniform design standards to launch systems as varied in design as, for example, the EELV programs and the Pegasus launch vehicle. Third, it is counter-productive because detailed implementation mechanisms that are too difficult or time-consuming to modify would stifle or, at best, impede the development of new safety approaches. For these reasons, we maintain that the existing safety standards and requirements set forth in EWR 127-1 are the more practical and effective means of fulfilling the CSLA mandate to ensure public safety. Specific design requirements or solutions (to the extent they are issued) are most effective when provided as technical guidance for operators rather than as legally mandated and rigid design requirements.

Lastly, the safety requirements proposed in the NPRM would impose these costs and create these serious operational issues, without any apparent accompanying benefit to the public. The NPRM does not provide any explanation of any value added by the proposed requirements, let alone any efficiencies introduced. Indeed, in the Preamble to the NPRM, the Office acknowledges that it does not expect any increase in safety benefits as a result of implementation of the NPRM.<sup>10</sup> Without any such offsetting benefits, the cost and operational impact of the safety requirements proposed in the NPRM cannot be justified.

### **C. The Proposed Requirements are Contrary to the CSLA**

Exacerbating LMC's concerns is the fact that, in our view, based on a long-standing and unchallenged understanding of the statutory framework under which the Office operates, the Office's efforts as expressed in the NPRM not only are unwarranted, but contrary to its statutory mandate. In enacting the CSLA, the Congress identified all then-existing requirements necessary to secure authorization for conducting a commercial launch as requirements of a license issued by the Department of Transportation ("DOT"). However, the Congress also conferred upon the DOT the authority to establish the "regulatory regime" for commercial space transportation. This includes the discretion to determine how relevant requirements must be met and which executive agency is best suited to promulgate and enforce them. The Office has the flexibility under the CSLA to develop and issue its own rules, incorporate the rules or requirements of other executive agencies into its own rules, or allow compliance with other executive agencies' rules and requirements to satisfy the FAA's rules. Historically, the FAA has employed each of these three approaches. This authority allows it to ensure that there will be no duplicative or conflicting regulations imposed on the industry it is tasked with supporting, and that the resultant "regime" represents regulation that is only that "necessary" to protect specified national interests, while also "encouraging, facilitating, and promoting" the industry. For example, the FAA allows

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<sup>9</sup> For a detailed discussion on operational impact, see the Consolidated Industry Response.

<sup>10</sup> NPRM at 63,963.

the rules administered by the Occupational Safety and Health Administration to apply to workers engaged in commercial launch operations.<sup>11</sup> Furthermore, the FAA hitherto has accepted the range safety requirements administered by the Air Force (*i.e.*, EWR 127-1) to apply to commercial launch operations at the federal ranges. This flexible approach, which has proved successful in light of the industry's outstanding safety record, has been critical to the success of the commercial launch industry. LMC questions the need to upend or alter this arrangement with respect to the application of EWR 127-1, particularly in light of the fact that the Office is not legally compelled to do so, except to replace it with something manifestly better.

When drafting the CSLA, the Congress stated unambiguously that the Act, and implementation of the Act, should reduce the regulatory burden for commercial launch operators and that the authority of the Secretary of Transportation<sup>12</sup> (the "Secretary") to issue additional requirements and regulations must conform with the Congress' expressed desire to streamline the licensing process for commercial launch and launch operation.<sup>13</sup> To that end, the Congress encouraged the Secretary to use this authority, as appropriate, to eliminate any duplicative or unnecessary requirements for the launch of a launch vehicle or the operation of a launch site."<sup>14</sup> In determining whether requirements were duplicative or unnecessary, the Congress instructed the Secretary to consult with other executive agencies and eliminate unnecessary regulatory obstacles to the development of commercial launch operations and to ensure that those regulations and procedures found essential are administered as efficiently as possible.<sup>15</sup>

The drafters' intent as set forth above is embodied throughout the CSLA. It appears in: (1) the mandate that private sector launches should be regulated only to the extent necessary to ensure, among other things, the public health and safety and safety of property;<sup>16</sup> (2) the statement of purpose that the United States private sector be encouraged to provide launch vehicles and associated services by simplifying and expediting the issuance and transfer of commercial launch licenses;<sup>17</sup> (3) the directive to encourage, facilitate and promote commercial space launches by the private sector;<sup>18</sup> and (4) the clear instruction that the head of an executive agency shall assist the Secretary in carrying out the obligations set forth in the CSLA.<sup>19</sup> Based on a plain reading of the CSLA and its legislative history, we submit that the NPRM as drafted contravenes these dictates.

First, the FAA's imposition of launch safety requirements separate and distinct from those that are familiar to the industry and that have been applied and enforced effectively by the Air Force, working closely with the launch company users of its ranges for many years, would be a demonstration of wholly unnecessary and ill-considered regulation of the U.S. commercial

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<sup>11</sup> Commercial Space Transportation; Licensing Regulations: Interim Final Rule and Request for Comments, 51 Fed. Reg. 6870, 6873 (Feb. 26, 1986).

<sup>12</sup> The Secretary's authority lawfully has been delegated to the FAA.

<sup>13</sup> S. Rep. No. 98-656, at 5 (1984), *reprinted in* 1984 U.S.C.C.A.N. 5328, 5332.

<sup>14</sup> S. Rep. No. 98-656, at 11 (1984), *reprinted in* 1984 U.S.C.C.A.N. 5328, 5338.

<sup>15</sup> S. Rep. No. 98-656, at 3 (1984), *reprinted in* 1984 U.S.C.C.A.N. 5328, 5330.

<sup>16</sup> CSLA at § 70101(a)(7).

<sup>17</sup> CSLA at § 70101(b)(2)(A).

<sup>18</sup> CSLA at § 70103(b)(1).

<sup>19</sup> CSLA at § 70103(c).

launch services industry. EWR 127-1 solely will apply to all unlicensed launch services that LMC performs for the U.S. Government. Whether the customer of a particular launch service is the U.S. Government or a private sector (*i.e.*, commercial) entity should not be the factor that determines how to regulate the safety of a launch operation. From a safety perspective, there should be no difference in how such launches are regulated. To apply different safety rules to the same launch vehicles launching from the same launch pads at the same launch ranges by the same launch provider --just because one launch is for a U.S. Government customer and the other is for a commercial customer government -- is inappropriate. Furthermore, in light of the industry's impeccable safety record, LMC questions the prudence in applying a different approach to safety, when such approach, by the Office's own admission, will not enhance the public safety.<sup>20</sup> LMC respectfully submits that, given these circumstances, the proposed regulations are unnecessary and unjustifiable.

LMC understands that the Office consulted with the Air Force (*i.e.*, another executive agency) in developing the NPRM, which conforms to CSLA requirements. Even if the NPRM represents the results of that process, and the conclusions reached are embodied in the NPRM, LMC maintains that the NPRM is contrary to the letter and spirit of the CSLA. As stated earlier, if the NPRM is promulgated as drafted, the new regulations unnecessarily would impose on the industry a duplicative, and possibly conflicting and confusing, set of safety requirements. Considering that: (1) the FAA has the statutory flexibility to accept the assistance of other executive agencies in fulfilling its obligations under the CSLA;<sup>21</sup> (2) the Air Force's (*i.e.*, another executive agency's) launch range safety requirements are comprehensive, effectively implemented, familiar to the industry and applicable to both government and commercial launches; and (3) the industry, which is subject to the Air Force's standards at the federal ranges, has an impeccable safety record, adoption of this NPRM is in no way an improvement on the *status quo*, and, therefore is neither necessary nor appropriate.

Second, the NPRM as drafted does not meet the CSLA's requirement to simplify and expedite the issuance of commercial launch licenses. Quite the contrary. The burden of having to

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<sup>20</sup> NPRM at 63,963.

<sup>21</sup> CSLA at § 70103(c).

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<sup>21</sup> *Id.*

<sup>21</sup> Letter from Patti Grace Smith, Associate Administrator for Commercial Space Transportation, to G. Thomas Marsh, President of Lockheed Martin Astronautics, dated April 16, 2001.

<sup>21</sup> Commercial Space Transportation; Licensing Regulations: Interim Final Rule and Request for Comments, 51 Fed. Reg. 6870, 6873 (Feb. 26, 1986).

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<sup>21</sup> S. Rep. No. 98-656, at 11 (1984), *reprinted in* 1984 U.S.C.C.A.N. 5328, 5338.

<sup>21</sup> S. Rep. No. 98-656, at 3 (1984), *reprinted in* 1984 U.S.C.C.A.N. 5328, 5330.

<sup>21</sup> CSLA at § 70101(a)(7).

<sup>21</sup> CSLA at § 70101(b)(2)(A).

<sup>21</sup> CSLA at § 70103(b)(1).

<sup>21</sup> CSLA at § 70103(c).

<sup>21</sup> NPRM at 63,963.

<sup>21</sup> CSLA at § 70103(c).

conform our launch systems and launch operations to a set of standards different from those applicable to launches we perform for the U.S. Government (*i.e.*, the EWR 127-1 standards with which we have complied for decades) would complicate and delay significantly our ability to obtain or renew commercial launch licenses. By making compliance with EWR 127-1 a requirement of our commercial launch licenses, the Office appropriately, effectively and without imposing undue hardship on its licensees, fulfills its CSLA mandate to protect the public health and safety and the safety of property. Again, the unimpeachable safety record of the U.S. commercial launch services industry is evidence of the success of this approach.

Third, the requirements set forth in the NPRM neither encourage, facilitate nor promote commercial space launches by the private sector. To the contrary, the cost and operational impact of the NPRM on our launch activities will be severe and, as such, will make it even more difficult for us to compete in the global marketplace – a marketplace that includes competitors that are the beneficiaries of substantial government support, including significant operational support. Again, because the NPRM will yield no additional public safety benefits, there is no apparent basis upon which to rationalize the greater regulatory burden. Moreover, the imposition of such a burden, and its concomitant adverse cost and operational impacts, which would undermine the industry's competitiveness in the world market to the point of jeopardizing its continued viability, is antithetical to the purpose of the CSLA.

### **III. CONCLUSION**

LMC views the NPRM as the product of an ambitious, well-intentioned undertaking by the Office to strengthen the means by which it protects public health and safety, and the safety of property. Indeed, LMC continues to support the role of the Office in crafting the optimal “regulatory regime” for this industry, and strongly encourages the FAA and the Air Force to work together towards real improvement in the process by which launch activity at federal ranges is regulated. We firmly believe that both agencies can best do that by moving expeditiously toward a uniform set of performance-based standards for all launch activity at the federal ranges, an action that LMC and the other launch companies have been advocating – and the OCST had advocated on industry’s behalf – for many years. Moreover, if the Office is intent on codifying safety requirements separate from those administered by the Air Force, the Office should afford greater opportunities for dialog with the U.S. launch industry well in advance of promulgation of a final rule.

To that end, the Office is referred to the recommendations of the Consolidated Industry Response that are hereby and particularly endorsed by LMC. LMC believes that the combined efforts of the FAA, the Air Force and the industry they oversee will yield a performance-based document that fulfills the mandates of the CSLA,

Based on the foregoing, LMC respectfully submits that the Office's proposed requirements fail to enhance the public safety or otherwise fulfill the Office’s statutory mandate. Instead they impose significant and unjustifiable burdens – cost, operational, technical and administrative – on the industry, and would seriously impair the US competitive stance in the global market for commercial launch services. LMC submits that the Office should engage with industry in further regulatory development, consistent with the recommendations in the Consolidated Industry

Response. The Office needs to establish a sounder analytical and policy basis for further rulemaking aimed at replacing the current launch-safety regime at the Federal ranges. In no case should the Office proceed to a final rule at this time.

April 23, 2001