

SUPPORTING STATEMENT

OMB-2120-0608

TITLE 14, CODE OF FEDERAL REGULATIONS, PARTS 401, 413, 415, AND 417: LICENSING AND SAFETY REQUIREMENTS FOR LAUNCH (FOR EXPENDABLE LAUNCH VEHICLES), FINAL RULE

A. Justification¹

1. Explain the circumstances that make collection of information necessary. Identify any legal or administrative requirements that necessitate the collection.

The Commercial Space Launch Act of 1984, 49 U.S.C. App. §§ 2601 - 2623, as recodified at 49 U.S.C. Subtitle IX, Ch. 701 -- Commercial Space Launch Activities, 49 U.S.C. §§ 70101-70119 (1994), requires certain data be provided in applying for a license to conduct commercial space launch activities. These data are required to demonstrate to the Federal Aviation Administration (FAA), Associate Administrator for Commercial Space Transportation (AST), that a license applicant's proposed activities meet applicable public safety, national security, and foreign policy interests of the United States.

Regulations were issued by AST's predecessor office in April 1988, which reflect the Government's view that maintaining an efficient and reasonable regulatory approach is vital to this emerging industry. Since this time, the space transportation industry has grown. Between 1989 and December 31, 2008, 195 licensed commercial space launches have been conducted. The information collection outlined in this package satisfies the Department of Transportation (DOT) strategic goal of safety.

¹ Title 14, Code of Federal Regulations (CFR), parts 413, 415, and 417 collectively provide requirements to launch license applicants. Title 14, CFR, part 417 establishes requirements for obtaining a license to launch an expendable launch vehicle (ELV) from a non-federal launch site; it does not modify the license application process per se. Part 417 codifies safety responsibilities and requirements that apply to a licensed ELV launch, regardless of where it takes place. Accordingly, it prescribes standardized application requirements and clarifies safety issues that an applicant must address. Preparation of an application requires the collection of information. This supporting statement is an update to prior justification statements. Hence, it presents cost information that replaces prior estimates of the burden to industry and the federal government associated with the collection of information supporting the launch license and renewal application process for commercial ELVs. The following discrete final rule sections cause industry and the federal government to collect and review, respectively, information used to apply for a launch operator or launch specific license: 413.7, Application, 415.25; Application requirements for policy review; 415.33, Safety Organization; 415.35, Acceptable flight risk; 415.37, Flight readiness and communications plan; 415.39, Safety at end of launch; 415.41, Accident investigation plan; 415.59, Information requirements for payload review; 415.73, Continuing accuracy of license application; application for modification of license; 415.75, Agreement(s) with federal launch range; 415.77, Records; 415.79, Launch reporting requirements; 415.81, Registration of space objects; 415.103, General; 415.103, Environmental information; and 417.203, Compliance.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

This information collected is used by AST to determine and verify the ability and competency of a launch license applicant to conduct a commercial space launch operation in a safe and efficient manner. Information is collected before and after the issuance of either the launch-specific license or the launch operator license. An applicant's license proposal is assessed in terms of significant policy issues affecting the national security, foreign policy interests, or international obligations of the United States. Information collected will allow AST to make a preliminary assessment of a launch proposal prior to beginning general licensing application procedures. After favorable review by AST of an applicant's proposal in terms of policy implications, the applicant must demonstrate that it can safely launch its vehicle with payload. To achieve this end, the Launch Safety Evaluation process implemented by AST requires an applicant to submit information, including a safety program plan, a launch safety design and operations document, and an accident investigation plan. Accordingly, an applicant must satisfy pre-launch reporting requirements by providing launch specific information, including flight path data, payload design criteria, and mission specific launch waivers from federal sites or launch sites, not later than 60 days prior to the scheduled launch date. Further, in accordance with the requirements of the National Environmental Policies Act, 42 U.S.C. § 4321, et. seq., (NEPA), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA, 40 CFR Parts 1500-1508, and the DOT's Procedures for Considering Environmental Impacts, (that is, DOT Order 5610.1C), applicants will be required to submit environmental information to AST. This includes information concerning proposed new launch sites and launch vehicles not currently described in the environmental impact statements, as well as payloads that may have significant environmental impacts in the event of a launch accident. Each licensee is required to register the name and mission of the payload with the Office in accordance with Article IV of the 1975 Convention on Registration of Objects Launched Into Outer Space Treaty.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g. permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

AST has maintains a World Wide Web site on the Internet to improve the ability of the public to access information pertaining to the collection of information. In accordance with the Government Paperwork Elimination Act (GPEA), AST will implement the use of electronic submission of information wherever practicable. Currently, this is a small fraction of the material submitted for the license application. There are several reasons why this has not been extended, up to this point:

- There are a very small number of applicants each year

- The license applications do not follow any rigid structure
- Each license application is treated on a case-by-case basis
- Many parts of the license application (e.g. technical drawings) do not lend themselves to electronic format, or require specialized software packages that an applicant not own.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

To decrease industry burden, the applicant may submit any documentation, without reformatting that has previously been submitted to the Federal Launch Site, where such unique information routinely constitutes a small portion of the data collected. This is usually a small percentage of the required information, which is unique. Furthermore, an applicant may reference previously submitted information with noted changes.

5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden on small businesses or other small entities.

Pursuant to the Regulatory Flexibility Act of 1980 (RFA), the Office certifies that the proposed rule would not have a significant economic impact on a substantial number of small entities. Regulations are written to allow flexibility and innovation.

6. Describe the consequence to Federal programs or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

The frequency of recordkeeping or reporting is contingent upon the respondent submitting a launch license application.

7. Explain any special circumstances that would cause the requirement to be inconsistent with guidelines 5 CFR 1320.5(d)(2)(i)-(viii).

This requirement follows the guidelines in 5 CFR 1320.5(d)(2)(i)-(viii).

8. Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

A notice was published in the Federal Register on February 2, 2009, Volume 74, Number 20, pages 5884-5885 allowing a 60 -day comment period. No comments were received.

9. Explain any decisions to provide any payment as gift to respondents, other than remuneration of contractors or grantees.

No decision was made to provide payments or special compensation to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

All information collected, including company proprietary information, is treated with the appropriate level of security.

11. Provide additional justification for any questions of a sensitive nature.

No sensitive information is required.

12. Provide estimates of the hour burden of the collection of information.

The burden to industry for collecting information to comply with final rule parts 413, 415, and 417 for either a Launch Operator or Launch Specific License involves several principal activities. These activities include pre-application consultation with FAA-AST, preparation of the license application, and resolution of questions associated with the application. The application process is generally the same for either Launch Operator or Launch Specific License, as the FAA-AST determines which license type is issued based on the information submitted with the application. The FAA estimates that the hour burden to industry for the collection of information necessary to comply with the aforementioned final rule parts in order to complete and submit a license application can be as many as 2,808 hours.² Further, the FAA estimates that the hour burden to industry for the collection of information necessary to support a license renewal application can be as many as 281 hours.³

Industry base salary in 2009 is estimated to be \$95,000.⁴ Generally, the base salary is loaded with commercial fringe benefits in accordance with the FAA's 1998 *Economic Analysis of Investment and Regulatory Decisions – Revised Guide*; however the commercial fringe benefit rate contained in the Guide —23.45% — is considered outdated for industry applications. Hence, it is preferable to load the base salary with current information available from the Aerospace Industry Association database that more accurately reflects the commercial fringe benefit rate. As summarized in Table 1, this results in an estimated industry loaded salary of \$126,910; accordingly, hourly labor costs are \$61.01 (calculated as \$126,910 ÷ 2,080 = \$61.01).

² Discussions in 2005 with AST personnel indicate that industry expends in excess of 3 person-years, or 6,240 hours (calculated as 2,080 annual person-hours × 3 person-years = 6,240 person-hours) per applicant to comply with the entire license application process. The hour burden to industry for the collection of information necessary to support the application process can be as much as 45 percent of the total hours expended in this process, or 2,808 hours (calculated as 0.45 × 6,240 = 2,808).

³ Discussions in 2005 with AST personnel indicate that as much as 10 percent of the 2,808 hours are expended collecting information necessary to support a license renewal application.

⁴ Space transportation salaries are based on information obtained from the U.S. Bureau of Labor Statistics (BLS) and the Aerospace Industry Association (AIA) and adjusted for inflation. The mean 2004 salary for aerospace engineers of \$83,620 available from the BLS database was inflated by the seasonally unadjusted consumer price index (CPI) for all urban consumers to arrive at a 2005 salary of \$86,453. The mean 2003 salary for aerospace engineers of \$83,620 available from the AIA database was inflated by the seasonally unadjusted consumer price index (CPI) for all urban consumers to arrive at a 2005 salary of \$79,708. The average of the estimated 2005 aerospace engineer salaries derived from BLS and AIA information is \$83,080 [calculated as (\$86,453 + \$79,708) ÷ 2 = \$83,080]. With an inflation adjustment of 1.13 (2008:2004 dollars), the average estimated 2008 aerospace engineer salary is \$83,080*1.13 = \$93,880. This value is rounded up to \$95,000 to account for uncertainties and inflation from 2008 to 2009.

TABLE 1. Private Sector Fringe Benefit Factors and Loaded Salary

Category	Government Factor
Insurance	13.26%
Retirement and Savings	8.07%
Legally Required	11.49%
Other	0.76%
Total Fringe Benefit	33.59%
Industry Loaded Salary ^a	\$126,910

Source: Commercial factor from Employer Costs for Employee Compensation in the Aircraft Manufacturing Industry, White-Collar Occupations, March 1999-2004, Aerospace Industry Association.

^a Calculated as $\$95,000 \times 1.3359 = \$126,910$.

Multiplying the industry collection of information hourly burden by the industry hourly labor cost yields \$171,316 (calculated as $2,808 \times \$61.01 = \$171,316.08$) per initial application, and \$17,144 (calculated as 10% of the initial application cost of \$171,316.08, $0.1 \times \$171,316.08 = \$17,131.61$) for a license renewal application. Multiplying the application cost by the estimated annual number of applications yields the annual information collection cost burden to industry associated with the final rule parts — \$342,632 for initial license applications and \$34,263 for renewal applications. This is summarized in Table 2.

TABLE 2. Collection of Information Burden to Industry

Category	Hour Burden	
	Initial Application	Renewal Application ^a
Hours required to submit each application	2,808	281
Number of applications per respondent ^b	1	1
Annual number of applications ^b	2	2
Industry cost per application	\$171,316	\$17,132
Industry annual cost ^c	\$342,632	\$34,263

^a Renewal of a license application is voluntary; a license is approved for five years.

^b Federal Aviation Administration, Office of Commercial Space Transportation (FAA/AST), April 2006.

^c Industry total cost per annum calculated as $\$171,316 \times 2 = \$342,632$ for initial applications, and renewal applications are calculated as 10% of the initial application cost, or $0.1 \times \$342,632 = \$34,263$ for a renewal applications.

13. Provide an estimate of the total annual cost burden to respondents or recordkeepers resulting from the collection of information.

There are neither capital and start-up costs nor operation and maintenance costs resulting from the collection of information in addition to those shown above in item 12.

14. Provide estimates of annualized cost to the Federal government.

The burden to the federal government associated with information collected to comply with final rule parts 413, 415, and 417 for either a Launch Operator or Launch Specific License

involves several principal activities. These activities include pre-application consultation with industry and review of preliminary information; review of the formal application and its disposition (that is, approval or disapproval); resolution of questions associated with the application; and amending an approved license. The application review process is generally the same for either a Launch Operator or Launch Specific License, as the FAA-AST determines which license type is issued based on the information submitted with the application. The FAA estimates that it expends as many as 3,900 hours to review and process the information collected associated with an application submittal in compliance with final rule parts 413, 415, and 417.⁵ Further, the FAA estimates that the hour burden it incurs to review information necessary to support a license renewal application can be as many as 390 hours.⁶

Base salary in 2009 for FAA personnel is estimated to be \$95,000.⁷ As summarized in Table 3, the base salary loaded with federal government fringe benefits is \$125,828, resulting in an FAA hourly labor cost of \$60.49 (calculated as \$125,828 ÷ 2,080 = \$60.49). Multiplying the FAA hourly burden to review collected information by the federal government hourly labor cost yields \$235,911 (calculated as 3,900 × \$60.49 = \$235,911) to review an initial application, and \$23,591 (calculated as 10% of \$235,911) to review a license renewal application. Multiplying the application cost by the estimated annual number of applications yields the annual collected information review and processing cost burden to the FAA associated with the final rule — \$471,822 for initial licenses and \$47,182 for renewals. This is summarized in Table 4.

TABLE 3. Public Sector Fringe Benefit Factors and Loaded Salary

Category	Government Factor
Retirement and Disability	23.7%
Health and Life Insurance	5.60%
Medicare	1.45%
Miscellaneous	1.70%
Total Fringe Benefit	32.45%
Federal Government Loaded Salary ^a	\$125,828

Source: “Economic Analysis of Investment and Regulatory Decisions – Revised Guide,” U.S. Dept. of Transportation/Federal Aviation Administration, January, 1998, p. 4-22.

^a Calculated as \$95,000 × 1.3245 = \$125,827.50, rounded up to \$125,828.

⁵Discussions in 2005 with AST personnel indicate that the FAA expends as much as 2.5 person-years, or 5,200 hours (calculated as 2,080 annual person-hours × 2.5 person-years = 5,240 person-hours) to execute the license application review process for a single submittal. The hour burden to the FAA to review and process the information collected associated with an application submittal can be as much as 75 percent of the total hours expended in this process, or 3,900 hours (calculated as 0.75 × 5,200 = 3,900).

⁶Discussions in 2005 with AST personnel indicate that as much as 10 percent of the 3,900 hours are expended reviewing and processing the information collected to support a license renewal application.

⁷ Base salary from the 2006 General Schedule Salary Table 2006-DCB (for the locality pay area of Washington-Baltimore, Northern Virginia, DC-MD-PA-VA-WV), GS-13, Step 5. Fringe benefit from Economic Analysis Investment and Regulatory Decisions — Revised Guide, Federal Aviation Administration, January 1998, page 4-22. With an inflation adjustment of 1.07 (2008:2006 dollars), the average estimated 2008 FAA personnel salary is \$87,664*1.07 = \$93,800. This value is rounded up to \$95,000 to account for uncertainties and inflation from 2008 to 2009.

TABLE 4. Collection of Information Burden to Federal Government

Category	Hour Burden	
	Initial Application	Renewal Application ^a
Hours required to submit each application	3,900	390
Number of applications per respondent ^b	1	1
Annual number of applications ^b	2	2
Federal government cost per application	\$235,911	\$23,591
Federal government annual cost ^c	\$471,822	\$47,182

^a Renewal of a license application is voluntary.

^b Federal Aviation Administration, Office of Commercial Space Transportation (FAA/AST), April 2006.

^c Federal government total cost per annum calculated as $\$235,911 \times 2 = \$471,822$ for initial applications; calculated as 10% of $\$471,822$, or $\$47,182$ for renewal applications.

Final rule Section 417.203, *Compliance*, creates some urgency in the frequency with which the FAA must perform and complete its baseline safety assessment of federal range flight safety analyses. Baseline assessments must be updated promptly in orders to be consistent with current federal range flight safety analyses, thereby permitting application of the final rule requirement. The FAA finds that more extensive reviews of federal range flight safety programs will be required in order to keep abreast of the increasing number, diversity, and complexity of commercial launches from federal ranges and associated flight safety analyses. Hence, the FAA is likely to incur additional costs to perform more rigorous and timely baseline assessments, which include reviewing information. Therefore, the associated hourly burden to the FAA to collect, review, and process information deserves mention. Accordingly, the FAA estimates that 1.5 person-years (that is, 1 ½ full-time personnel, which corresponds to 3,120 labor hours, calculated as 1.5 persons \times 2,080 annual hours = 3,120 hours) will be expended annually to administer and implement § 417.203. This will result in an administrative cost to the FAA of approximately \$188,729 per annum (calculated as $\$60.49 \times 3,120$ hours = $\$188,728.80$, rounded up to $\$188,729$). Additionally, federal organizations other than the FAA, such as DOD and NASA (that is, federal personnel that are range operators) may be required to expend additional effort and incur incremental costs cooperating with the FAA as it prepares for more rigorous, extensive, and frequent baseline assessments, and cooperating with the FAA during their conduct.

15. Explain the reasons for any program changes or adjustments.

There are no burden changes from the previous submission.

16. For collections of information whose results will be published, outline plans for tabulation, and publication.

We do not intend to publish this information.

17. If seeking approval to not display the expiration date of OMB approval of the information collection, explain the reasons that display would be inappropriate.

No approval is sought.

18. Explain each exception.

There are no exceptions.