

SUPPORTING STATEMENT

OMB Control Number 2120-0608

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

A. Justification¹

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

51 U.S.C. Subtitle V, Ch. 509 -- Commercial Space Launch Activities, 51 U.S.C. §§ 50901-50921 (2011), 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), Office of 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.

14 CFR parts 413, 415, and 417 collectively provide requirements to launch license applicants. Parts 413 and 415 establish requirements for obtaining a license to launch an expendable launch vehicle (ELV). Part 417 codifies safety responsibilities and requirements that apply to a licensed ELV launch. Together, parts 413, 415, and 417 prescribe standardized application requirements and clarify safety issues that an applicant must address. Preparation of an application requires the collection of information. The following 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; 417.11, Continuing accuracy of license application; application for modification of license; 417.13, Agreement(s) with federal launch range; 417.15, Records; 417.17, Launch reporting requirements; 417.19, Registration of space objects; 415.103, General; 415.203, Environmental information; and 417.203, Compliance.

¹ 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.

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.

All entities wishing to obtain or maintain a license to conduct commercial space launch activities are mandated to report information to this collection. The 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 a launch-specific license or a 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 allows 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, AST's safety evaluation process requires an applicant to submit information, including a safety program plan, a launch safety design and operations document, and an accident investigation plan.

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 are 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.

A licensee 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. Each licensee is also required to register the name and mission of the payload with AST 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 maintains a website to improve public access to information about the licensing process.

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 a Federal Launch Range. In general, an applicant can submit information in any format. Unique information routinely constitutes a small portion of the data collected. 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), AST certified in the final rule (71 FR 50537) that the regulation would not have a significant economic impact on a substantial number of small entities. The 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.

AST cannot authorize the launch of a launch vehicle without the necessary application material. Many launch operators hold launch operator licenses, which allow multiple launches under a single license, significantly reducing burden. These licenses are good for 5 years, and can be renewed with minimal burden. Reducing the burden further by extending the license period could impact AST's ability to protect public health and safety.

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 March 28, 2018 (83 FR 13340). 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.

Presently AST is legally bound by 14 CFR Part 413 regulations that address License Application Procedures. § 413.9 Confidentiality, states the following:

(a) Any person furnishing information or data to the FAA may request in writing that trade secrets or proprietary commercial or financial data be treated as confidential. The request must be made at the time the information or data is submitted, and state the period of time for which confidential treatment is desired.

(b) Information or data for which any person or agency requests confidentiality must be clearly marked with an identifying legend, such as "Proprietary Information," "Proprietary Commercial Information," "Trade Secret," or " Confidential Treatment Requested." Where this marking proves impracticable, a cover sheet containing the identifying legend must be securely attached to the compilation of information or data for which confidential treatment is requested.

(c) If a person requests that previously submitted information or data be treated confidentially, the FAA will do so to the extent practicable in light of any prior distribution of the information or data.

(d) Information or data for which confidential treatment has been requested or information or data that qualifies for exemption under section 552(b)(4) of Title 5, United States Code, will not be disclosed to the public unless the Associate Administrator determines that the withholding of the information or data is contrary to the public or national interest.

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 14 CFR 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 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 Licenses, as 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 14 CFR parts 413, 415, and 417 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

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).

to support a license modification is roughly 1,404 hours and a license renewal application can be as many as 281 hours.³

Industry base salary is estimated to be \$112,008⁴. Base salary is loaded the commercial fringe rate based on information available from the Aerospace Industry Association database. As summarized in Table 1, this results in an estimated industry loaded salary of \$131,040; accordingly, hourly labor costs are \$ (calculated as \$131,040 ÷ 2,080 = \$63.00).

TABLE 1. Private Sector Fringe Benefit Factors and Loaded Salary

Category	Government Factor
Total Fringe Benefit	17.00%
Industry Loaded Salary ^a	\$131,040

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 \$112,008 × 1.17 = \$131,040.

Multiplying the industry collection of information hourly burden by the industry hourly labor cost yields \$176,904 (calculated as 2,808 × \$63.00 = \$176,904) per initial application, \$88,452 for a major license modification application (calculated as 50% of the initial application cost) and \$17,703 for a license renewal application (calculated as 10% of the initial application cost). Multiplying the application cost by the estimated annual number of applications yields the annual information collection cost burden to industry associated with the regulations — \$1,061,424 for initial license applications, \$707,616 for major license modifications, and \$53,109 for renewal applications. This is summarized in Table 2.

TABLE 2. Collection of Information Burden to Industry

Category	Hour Burden			Total
	Initial Application	Modification Application ^a	Renewal Application ^b	
Hours required to submit each application	2,808	1,404	281	
Number of applications per respondent ^d	1	1	1	
Annual number of applications ^c	6	8	3	17
Total Hours	16848	1132	843	28923
Cost per application	\$176,904	\$88,452	\$17,703	
Annual cost ^d	\$1,061,424	\$707,616	\$53,109	

^a Includes major modifications to existing licenses.

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

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. In addition, data suggests that major modifications require as much as 50% of the 2,808 hours expended for initial applications.

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.

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

^d Industry total cost per annum calculated as $\$176,904 \times 6 = \$1,061,424$ for initial applications, major modification applications are calculated as 50% of the initial application cost, or $\$88,452 \times 8 = \$707,616$, and renewal applications are calculated as 10% of the initial application cost, or $\$17,703 \times 3 = \$53,109$ for renewal applications.

Thus, the total annual burden to industry is $(2,808 \text{ hours} \times 6) + (1,404 \times 8) + (281 \text{ hours} \times 3) = \mathbf{28,923 \text{ hours}}$.

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 14 CFR 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 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 14 CFR 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 2012 for FAA personnel is estimated to be \$109,533.⁷ As summarized in Table 3, the base salary loaded with federal government fringe benefits is \$149,240, resulting in an FAA hourly labor cost of \$71.75 (calculated as $\$149,240 \div 2,080 = \71.75). Multiplying the FAA hourly burden to review collected information by the federal

⁵Discussions in 2005 with AST personnel indicate that the FAA expends as much as 2.5 person-years, or 5,200 hours (calculated as $2,080 \text{ annual person-hours} \times 2.5 \text{ person-years} = 5,200 \text{ person-hours}$) 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 $0.75 \times 5,200 = 3,900$).

⁶ Discussions 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 Data from FY15 – 17 suggests that requests for major modifications to existing license applications result in roughly 50 percent of the 3,900 hours expended for an initial application

⁷ Base salary from the 2014 General Schedule Salary Table 2014-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.

government hourly labor cost yields \$279,825 (calculated as 3,900 × \$71.75 = \$279,825) to review an initial application, \$139,913 to review a license modification (calculated as 50% of \$279,825), and \$27,983 to review a license renewal application (calculated as 10% of \$279,825). 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 — \$1,678,950 for initial licenses, \$1,119,300 for modified licenses, and \$83,948,933 for renewals. This is summarized in Table 4.

TABLE 3. Public Sector Fringe Benefit Factors and Loaded Salary

Category	Government Factor
Total Fringe Benefit	0
Federal Government Loaded Salary ^a	\$149,240

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 \$109,533 × 1.3625 = \$149,240.

TABLE 4. Collection of Information Burden to Federal Government

Category	Hour Burden		
	Initial Application	Modification Application ^a	Renewal Application ^b
Hours required to submit each application	3,900	1,950	390
Number of applications per respondent ^d	1	1	1
Annual number of applications ^c	6	8	3
Federal government cost per application	\$279,825	\$139,913	\$27,983
Federal government annual cost ^d	\$1,678,950	\$1,119,300	\$83,948

^a Includes major modifications to existing licenses.

^b Renewal of a license application is voluntary.

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

^d Federal government total cost per annum calculated as \$279,825 × 6 = \$1,678,950 for initial applications; calculated as 50%, or \$139,913, for each major modifications = \$1,119,300; calculated as 10%, or \$27,983, for each renewal application = \$83,948.

14 CFR § 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 order to be consistent with current federal range flight safety analyses, thereby permitting application of the 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 × 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 \$202,488 per annum (calculated as \$71.75 × 3,120 hours = \$223,860). 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.

Thus, the total cost to the FAA for processing information received under parts 413, 415, and 417 is \$1,678,950 + \$1,119,300 + \$83,948 + \$223,860 = **\$3.106,058.**

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

The estimated annual number of applications has been increased and annual salary figures have been updated from the previous submission, resulting in changes to cost burden estimates. The FAA has separated collection activity into appropriate information collections, there has not been additional forms or applications added.

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.