

## SUPPORTING STATEMENT

**TITLE OF INFORMATION COLLECTION:** NASA Aviation Safety Reporting System (ASRS) and Related Voluntary Safety Reporting System (VSRS)

**TYPE OF INFORMATION COLLECTION:** Existing Collection In Use Without an OMB Control Number

### **A. JUSTIFICATION**

#### **1. Explain the circumstances that make the collection of information necessary.**

The NASA Ames Research Center, Human Systems Integration Division, manages voluntary safety reporting systems (VSRS) to collect and share safety information including, but not limited to, the NASA Aviation Safety Reporting System (ASRS) and the Confidential Close Call Reporting System (C3RS). Both systems are voluntary reporting systems for the reporting of safety incidents, events, or situations. Respondents include, but are not limited to, any participant involved in safety-critical domains such as aviation or railway operations including commercial and general aviation pilots, rotorcraft pilots, drone operators, air traffic controllers, flight attendants, ground crews, maintenance technicians, dispatchers, train engineers, conductors, and other members of the public.

The collected safety data are used by NASA, Federal Aviation Administration (FAA), Federal Railroad Administration (FRA), and other organizations that are engaged in research and the promotion of safety. The data are used to (1) Identify deficiencies and discrepancies so that these can be remedied by appropriate authorities, (2) Support policy formulation and planning for improvements and, (3) Strengthen the foundation of human factors safety research. Respondents are not reimbursed for associated cost to provide the information.

The ASRS enables individuals to voluntarily report their observations and/or experiences relevant to transportation safety. Information collected includes, but is not limited to incidents, near-misses, and close calls. Reports submitted may describe both unsafe occurrences and hazardous situations. The ASRS reporting scope does not include accidents nor criminal events.

#### **2. Indicate how, by whom, and for what purpose the information is to be used.**

The information collected is used to improve the national transportation system. Participation is voluntary.

The reporting programs enable the identification of system deficiencies and issues alert messages to persons in a position to address/correct them. Managed through NASA Ames Research Center, the ASRS database serves the FAA, aviation industry, NASA, and other organizations world-wide who are engaged in research and the promotion of flight safety. C3RS serves the FRA and the railroad industry. For both, the reported safety data are used to:

- Identify deficiencies and discrepancies in the national transportation system to facilitate remedy by appropriate authorities.
- Support policy formulation and planning, and process improvements.
- Strengthen the foundation of transportation safety research. This is particularly important since it is generally conceded that over two-thirds of all aviation accidents and incidents have their roots in human performance errors
- Enhance the basis for human factor research and recommendations for future procedures, operations, facilities, and equipment.

**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.**

The majority of the voluntary reports are submitted through secure, electronic methods; although paper report submissions are also accepted. The electronic format is instrument fillable, may be saved on-line, and filed on-line through secure transmission. The ability to receive reports electronically assists in the efficiency of the stages of report processing by human subject matter analysts.

The ASRS reports are accessed at <https://asrs.arc.nasa.gov>

The C3RS reports are accessed at <https://c3rs.arc.nasa.gov>

**4. Describe efforts to identify duplication.**

There is no duplication as there are no other sources available to collect this information. NASA was selected by the FAA and FRA to perform the report analysis of safety information voluntarily submitted as an independent, honest broker between the regulator and the industry, due to the public's trust in NASA. The NASA role provides a unique avenue to obtain safety information not available through other means. The nature of this agreement between FAA and NASA is established in the FAA Advisory Circular 00-46E ([https://asrs.arc.nasa.gov/docs/AC %2000-46E.pdf](https://asrs.arc.nasa.gov/docs/AC%2000-46E.pdf))

**5. If the collection of information impacts small businesses or other small entities (Item 5 of the OMB Form 83-I), describe the methods used to minimize burden.**

There is no impact on small businesses or other small entities. Reports that are submitted are from individuals and not business entities.

**6. Describe the consequence to federal program 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.**

Any reduction in voluntary reporting would significantly reduce the availability of safety information provided voluntarily that describe safety events; some very hazardous. There is no

other voluntary, confidential, non-punitive reporting option available to these individuals. Respondents are not required to file these reports with any frequency, rather the respondents decide when and how often to submit.

**7. Explain any special circumstances that would cause an information collection to be conducted in a manner: -**

All answers are “No”. There are no special circumstances. The collection of information is conducted in a manner consistent with the guidelines in 5 CFR 1320.6.

**8. Provide the date and page number of publication in the Federal Register for the 60-day and 30-day FNRS, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB.**

**60-day FRN:** Federal Register Volume 83, Number 211, on 10/31/2018. No comments were received.

**30-day FRN:** Federal Register Volume 84, Number 107, on 6/4/2019. No comments were received.

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

No payments or gifts are provided to respondents.

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

The information in this collection is not subject to the Privacy Act. The reports submitted to ASRS may contain personally identifying information that, if released inadvertently, could reveal the reporters identify. NASA offers assurance of confidentiality to its reporters under FAA Advisory Circular 00-46E and title 14 of the Code of Federal Regulations (14 CFR) part 91, § 91.25. Release of personally identifying information is protected from FOIA requests under Exemptions 5 (Deliberative Process Privilege) and 6 (Information that if disclosed would invade another individual’s personal privacy)

In order to provide the confidentiality, each report is de-identified through a NASA analytic process using subject matter experts. ASRS analysts de-identify each report to protect the individual by removing all references that could directly or indirectly reveal the identity of the reporter. After de-identified, reports are reviewed for quality assurance.

After reports are de-identified they can only be retrieved by the assigned Accession Control Number, which cannot be traced back to the respondent.

**11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.**

Questions of a sensitive nature are not included in this information collection.

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

In 2018, NASA received 103,344 safety report submissions across both ASRS and C3RS. Each is estimated to take approximately 30 minutes, for a burden of 51,672 hours.

Category of Respondent	Number of Respondents	Participation Time	Burden (hours)
Individual or households	103,344	30 minutes	51,672 hours
Business or other for-profit	0	0	0
Not-for-profit institutions	0	0	0
Farms	0	0	0
Federal Government	0	0	0
State, Local or Tribal Government	0	0	0

*\* Based on 2018 data*

The following table presents the total number of submission reports by the three reporting mechanisms: Respondents may submit a paper form, submit electronically via secure website, and we receive data indirectly from airline partners who forward safety reports. These airline partners have generated their own safety forms. These forms are not created by, or sponsored by, NASA. The airline partners share select data fields via electronic transmission of xml files.

ASRS total shown below includes all variants of the ASRS forms; C3RS total includes all variants of the C3RS forms. The forms are nearly identical and each carry the same reporting burden -- approximately 30 minutes to complete regardless of reporting mechanism.

Forms include: ASRS General (ARC# 277B), ASRS ATC (ARC #277A), ASRS Maintenance (ARC #277D), ASRS Cabin (ARC #277C), ASRS UAV (ARC #XXX), ASRS Rotorcraft (ARC 277# XXX ), C3RS Transportation (ARC # 277F), C3RS Mechanical (ARC #277G), C3RS Engineering (ARC #277H).

Form	Paper	Electronic	Indirect	Time to Complete	Burden (hours)
ASRS	485	16000	82525	30 min	49,505 hours
C3RS	86	4248	0	30 min	2,167 hours

*\* Based on 2018 data*

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

The estimate of annualized cost to respondents for the hour burdens use the Dept of Labor, Bureau of Statistics annual wage rates averaged for occupations of individuals submitting ASRS reports. The total hour burden estimate is 51,672 hours. Approximately 65% of respondents (33,587) can be considered highly skilled with an approximate average annual wage rate of \$111,930 and average hourly wage rate is \$53.82. Approximately 35% (18,085) are lesser skilled with an approximate average salary of \$60,320 per year or \$29 per hour. Therefore, the annualized cost would be estimated at \$2,332,117.

	Burden hours	Hourly Rate	Total
Highly Skilled	33,587	53.82*	\$1,807,652.34
Less Skilled	18,085	29.00 **	\$524,465.00
Total	51,672		\$2,332,117.34

\* Average salary for airline pilot

\*\* Average salary for airline mechanics, flight attendants, railroad employees

**14. Cost to the Federal Government: Provide estimates of annualized costs to the Federal government.**

When respondents submit paper responses by mail they may use postage-paid envelopes. The cost to the federal government for postage is approximately \$300. [ (485 + 86) \* .55 = 314.05]

NASA manages report form processing under contract. The contract cost associated with processing these forms is approximately 4.3 M annually. This is broken down as follows:  
 Labor: 3.9 M  
 Equipment & Facilities: 312 K  
 Other Direct Costs (e.g. Materials, Software, Publications): 88K

**15. Changes in Burden: Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-I, if applicable.**

Not applicable. The information collection is requesting OMB approval.

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

Reports are selected for safety content, de-identified, and published to the publically available online database. (<https://asrs.arc.nasa.gov/search/database.html>)

This is an on-going operational program with no foreseeable end-date.

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

NASA will display the expiration date on the electronic version of the forms within the required PRA Statement with the exception of the paper forms. NASA is seeking approval to not display the expiration date on the paper forms associated with this information collection. An exemption from printing the expiration date on the paper forms is requested based on the high cost of reprinting.

**18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submissions," of OMB Form 83-I.**

The NASA office conducting or sponsoring this information collection certifies compliance with all provisions listed above.

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*Date: \_\_4/22/2019\_\_*