



National Aeronautics and Space Administration

INDUSTRY DAY PRE-SOLICITATION CONFERENCE

Aviation Safety Reporting System (ASRS) and Related Systems

RFP # NNA15540517R

NASA Ames Research Center
Moffett Field, CA 94035-0001

September 2, 2015





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MEETING AGENDA

- **Registration – sign-in sheet**
- **Procurement Process Overview** **Marianne Shelley**
- **Statement of Work / Technical Overview** **Linda Connell**
- **Submittal of Written Questions**
- **Individual Team Meetings (if requested)**



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This Industry Day Meeting /Pre-Proposal Conference is intended to:

- **Provide the current status of the Aviation Safety Reporting System (ASRS) and Related Systems acquisition;**
- **Familiarize participants with the ASRS Statement of Work (SOW) / technical requirements;**
- **Permit potential offerors an opportunity to network and discuss teaming or subcontracting arrangements;**
- **Allow potential offerors an opportunity to submit questions regarding the recently posted draft Request for Proposal and ASRS requirements.**



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General Guidance

- These slides shall not be interpreted as a comprehensive description of the Government's requirements. Please refer to the draft Statement of Work and draft Request for Proposal.
- Nothing discussed at this pre-proposal conference shall be construed as a revision to the draft Request for Proposal.
- If there are any inconsistencies between this presentation and the Final Request for Proposal, the Final Request for Proposal (RFP) will govern.
- Communications blackout period will be invoked when the Final RFP is issued.



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QUESTIONS

Following the presentation, all questions must be submitted in writing. All questions will be answered in a timely manner. All questions and answers will be made available on the NASA Acquisition Internet Service and Federal Business Opportunities websites.

Index cards have been provided to submit your questions.

All subsequent questions related to this pre-proposal conference or the draft Request for Proposal must be submitted to the Contracting Officer at Marianne.Shelley@nasa.gov, no later than

September 9, 2015.

Electronic Posting

All documents pertaining to the ASRS Procurement can be found at the following links:

NASA Acquisition Internet Service (NAIS) Business Opportunities:

<https://prod.nais.nasa.gov/cgi-bin/eps/bizops.cgi?gr=D&pin=21&=>

(see note below)

OR

Federal Business Opportunities (FBO):

<https://www.fbo.gov/index?s=opportunity&mode=list&tab=list&tabmode=list&=>

**These charts, the attendance list, and any submitted questions/ answers about the procurement will be posted to the above sites.

NOTE: Effective October 1, 2015, NAIS will no longer be supported, and all documents relating to NASA procurements will be only available at FBO. In order to continue monitoring NASA Business Opportunities, please go directly to FBO and use the search tool to search for NASA and other Federal government opportunities. You may also create a Vendor/Citizen account in FBO to sign up for email notifications for opportunities of interest.



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FOIA Requests

Freedom of Information Act (FOIA) Requests may be submitted electronically to foia@arc.nasa.gov

No proprietary information will be disclosed.

The NASAARC FOIA Electronic Reading Room can be accessed at <http://www.nasa.gov/centers/ames/business/foia/elec.html>



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ASRS Requirements Overview

- This will be a follow-on contract to the existing ASRS and Related Systems contract (NNA11AA19C) which has a performance period of December 8, 2010 through December 7, 2015. A six-month extension to the current contract is anticipated.
- This procurement provides the operation and maintenance of the ASRS and Related Systems. ASRS and Related Systems provides voluntary, independent, confidential safety reporting for aviation and railroad transportation, and potentially other domains. The ASRS (aviation safety reporting) and Confidential Close Call Reporting System (C3RS) (rail safety reporting) also provide research and development services such as analyses of aviation and rail databases to support improvements in performance and safety of the National Airspace System and the national rail system.
- NAICS (North American Industry Classification System) Code: 541990 – All Other Professional, Scientific, and Technical Services
- Small Business Administration Size Standard: \$15.0 M



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Acquisition Description

Single Award Hybrid contract with Cost-Plus-Fixed-Fee (CPFF) Requirement and an Indefinite Delivery Indefinite Quantity (IDIQ) CLIN (CPFF task orders).

Five-year performance period consisting of a two-year Base, and one one-year Option followed by a two-year Option • A 60-day Phase-in Period will be included in the Base

Work is to be performed at contractor-provided off-site facilities within five (5) miles of NASA Ames Research Center.

Government-provided property includes office and computer equipment, as listed in the Section J.1(a) Attachment 3.



General Procurement Information

- This procurement will be conducted through a full and open competition pursuant to FAR and NFS Part 15 – Contracting by Negotiations.
- FAR 52.215-1 and NFS 1815.209 allow for an award to be made without discussions. The Government may award a contract based solely on the initial proposals received. The Government reserves the right to hold discussions if award on the basis of initial offers is determined not to be in the best interest of the Government. If discussions are necessary, then a competitive range will be set and negotiations will commence. The initial proposals to the Government should contain the most favorable terms from a price and technical standpoint.
- The terms of the Solicitation and Statement of Work will remain UNCHANGED, once posted as a final RFP, unless the Solicitation is amended in writing.

Small Business Goals

All Offerors, except small businesses, must complete the portion of the instructions specific to the Small Business Subcontracting Plan. Small businesses are not required to submit Small Business Subcontracting Plans; however, small businesses are required to indicate the amount of effort proposed to be done by a small business either at the prime level or at the first tier subcontract level.

- The Government assessed the appropriate subcontracting goals for this acquisition.
- The small business goals for this procurement are as follows:
 - Total Small Business (SB): 25%
 - Small Disadvantaged Business (SDB) Concerns 5.0%
 - Women Owned Small Business (WOSB) Concerns 15.0%
 - Historically Black Colleges and Universities (HBCU)/Minority Institution (MI) 0.5%
 - HUBZone (HBZ) Small Business Concerns 3.0%
 - Veteran Owned Small Business (VOSB) Concerns 5.0%
 - Service-Disabled Veteran-Owned Small Business (SDVOSB) Concerns 3.0%



SOURCE EVALUATION PROCESS

Section L.7 - PROPOSAL PREPARATION—GENERAL INSTRUCTIONS

- Outlines the information required to be included in the proposal:
 - Volume I, Mission Suitability Proposal;
 - Volume II, Past Performance Proposal;
 - Volume III, Cost Proposal.

Section L.8 - PROPOSAL PAGE LIMITATIONS

- Outlines the page limits associated with various proposal sections and will be strictly enforced.



SOURCE EVALUATION PROCESS (CON' T)

As stated in Section M, there will be three (3) Evaluation Factors:

FACTOR 1 – MISSION SUITABILITY

FACTOR 2 – PAST PERFORMANCE

FACTOR 3 – COST/PRICE

The Mission Suitability Factor is evaluated at the subfactor level and is the only factor scored.

The Past Performance Factor is evaluated and given a Confidence Rating

The Cost/Price Factor is evaluated, but not scored



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EVALUATION FACTORS

Mission Suitability (Factor) – potential 1000 points

The Mission Suitability Factor consists of three Subfactors that are scored:

Subfactor 1 – Technical Understanding – 550 Points

(Elements: Reporting Systems Technical Domains, IT Systems Requirements, Security & Risk Management)

Subfactor 2 – Management Approach – 400 Points

(Elements: **Organization Structure and Partnering Approach**, Phase-In, **Staffing, Recruitment, Retention, Training**, Key Personnel, Total Compensation Plan, Organizational Conflicts of Interest Avoidance Plan)

Subfactor 3 – Small Business Utilization – 50 Points



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Mission Suitability

Technical Understanding and Small Business Utilization are submitted as part of the Written Proposal.

Two elements in the Management Approach Proposal shall be submitted in accordance with Section L.9, INSTRUCTIONS FOR MISSION SUITABILITY ORAL PRESENTATION

ORAL PRESENTATION CONTENT:

Organization Structure and Partnering Approach

Staffing, Recruitment, Retention, Training,

All other elements in the Management Approach Proposal shall be submitted as part of the Written Proposal.



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EVALUATION FACTORS (con't)

Past Performance (Factor)

Includes Significant Subcontractors (defined in Section L)

NASA will evaluate each Offeror's current/recent record of performing services or delivering products that are similar in size, content, and complexity to the requirements of this solicitation.



EVALUATION FACTORS (con't)

Cost/Price (Factor)

- The evaluated price will be the sum of the cost plus fixed fee proposed for the Contract Management and the cost plus fixed fee proposed for the Technical Services (CLINs 01A, 02A and 03A). Phase-In will not be included in the evaluated total cost for selection purposes, but it will be evaluated for the reasonableness and realism.
- Evaluation of options shall not obligate the Government to exercise such options.



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Weighting and Scoring

- Of the evaluation factors identified above, Mission Suitability is moderately more important than Past Performance, and Past Performance is moderately more important than Cost. Mission Suitability and Past Performance when combined are significantly more important than Cost. Offerors should note that items within any factor, if found to be unsatisfactory, may be the basis for rejection of an offer.



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Proposal Preparation

- Proposals shall be prepared in accordance with the Final RFP and subsequent written Amendments, if any.
- Ensure that all Amendments are acknowledged with the proposal submission.
- **Offerors must not assume that the evaluation team is aware of their company abilities, capabilities, plans, facilities, organization or any other pertinent fact that is important to accomplishment of the work.**



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Acquisition Schedule (Tentative)

Synopsis Issued	June 18, 2015
Draft RFP Issued	August 18, 2015
Pre-Proposal Conference	September 2, 2015
Questions/ Comments Due	September 9, 2015
Issue RFP	September 2015
Receipt of Proposals	November 2015
Contract Award (Phase-In)	April 2016



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Additional Information

Contracting Officer: **Marianne Shelley**
650-604-4179
Marianne.Shelley@nasa.gov

Location of current information can be found online at the NASA Business Opportunities or Federal Business Opportunities websites. Please search using either the solicitation number [NNA15540517R](#) or the procurement title:

AVIATION SAFETY REPORTING SYSTEM – ASRS – AND RELATED SYSTEMS.



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ARC Small Business Specialist

Christine Munroe

Telephone: (650) 604-4695

Facsimile: (650) 604-0912

Email: ARC-SmallBusiness@mail.nasa.gov



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QUESTIONS AND COMMENTS ARE REQUESTED
ON ALL AREAS OF THE DRFP

QUESTIONS AND COMMENTS DUE BY
SEPTEMBER 9, 2015

Section J Attachments

	Title
1	Statement of Work
2	Contract Data Requirements List (CDRL)
3	Government-Furnished Equipment List
4	Contractor's IT Security Management Plan*(due 30 days after award for approval) (Section I.1, NFS 1852.204-76, CDRL Item 14)
5	IT Applicable Documents List (ADL) (Section I.1, NFS 1852.204-76)
6	Contractor's Small Business Subcontracting Plan* (if applicable)
7	Contractor's Organizational Conflicts of Interest Avoidance Plan* (submitted with proposal)
8	Contractor's Facility Security Plan* (due no later than 5 days after award, CDRL Item 19)
9	Contractor's Contract Phase-In Plan* (submitted with proposal)
10	Contractor's Safety Plan* (CDRL Item 13, due NLT 30 days after award)
11	Contractor's Government Property Management Plan* (CDRL Item 10, due with proposal, to be evaluated and finalized after award)
	* To be incorporated at time of award or by subsequent modification.

STATEMENT OF WORK

2.0	SCOPE OF WORK
2.1	PERSONNEL, FACILITY, AND INFORMATION TECHNOLOGY (IT)
2.2	OPERATION AND MAINTENANCE OF ASRS
2.3	ASRS RESEARCH AND PRODUCTS
2.4	ASRS PROGRAM DELIVERABLES
2.5	OPERATION AND MAINTENANCE OF CONFIDENTIAL CLOSE CALL REPORTING SYSTEM (C ³ RS)
2.6	C ³ RS RESEARCH AND PRODUCTS
2.7	C ³ RS PROGRAM DELIVERABLES
2.8	FORMER PSRS AND SIRS DOCUMENTS AND MATERIALS
2.9	OVERALL PROGRAM DELIVERABLES



STATEMENT OF WORK

3.0	INDEFINITE DELIVERY INDEFINITE QUANTITY AREAS (IDIQ)
4.0	PHASE-IN AND PHASE-OUT
4.1	PHASE-IN PLAN
4.2	PHASE-OUT PLAN
5.0	STATEMENT OF WORK ACRONYMS AND TECHNICAL TERMS
6.0	APPENDIX AND ATTACHMENTS TO STATEMENT OF WORK
6.1	ASRS AB/FYI CLASS TRANSACTION LIST
6.2	ASRS RESPONSE CODE TRANSACTION LIST
6.3	ASRS MINIMUM SECURITY CONSIDERATIONS
6.4	ASRS AND RELATED SYSTEMS – LABOR CATEGORIES AND DESCRIPTIONS



ASRS Program Briefing



September 2015

**AVIATION SAFETY
REPORTING SYSTEM**

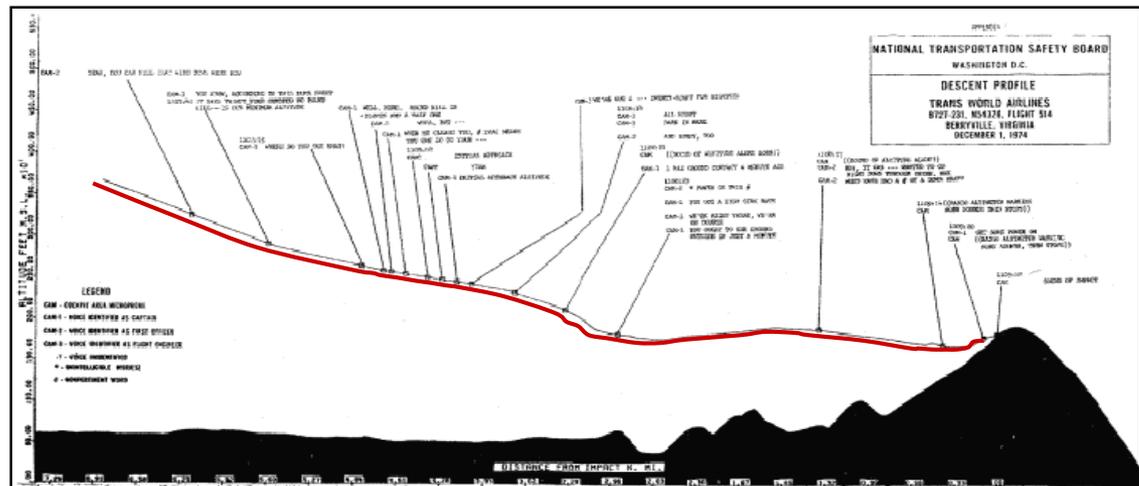


ASRS Program Overview



ASRS History

- The ensuing investigation revealed that six weeks prior, a United Airlines crew had experienced an identical ATC misunderstanding and narrowly missed the same mountain.
- At the time there was no method of sharing the United pilot's experience with TWA and other airline operators.
- This solidified the idea of a national aviation reporting program that would enable information sharing.
- In April 1976, NASA and FAA implemented the Aviation Safety Reporting System (ASRS)



ASRS Background

- WW II** Industry and Military recognized value of voluntary incident reporting
- 1958** Need for U.S. Incident Data System raised during FAA Enactment Hearings
- Oct. 1974** United Airlines incident foreshadowed TWA 514 Accident
- Dec. 1974** TWA 514 Accident
- Apr. 1975** Study of the National Air Transportation System as a Result of the Secretary's Task Force on the FAA Safety Mission
- May 1975** Aviation Safety Reporting Program (ASRP) Implemented (FAA)
- May 9, 1975** Advisory Circular 00-46 Issued
- Apr. 1976** Aviation Safety Reporting System (ASRS) Established (NASA/FAA)



Concept & Mission

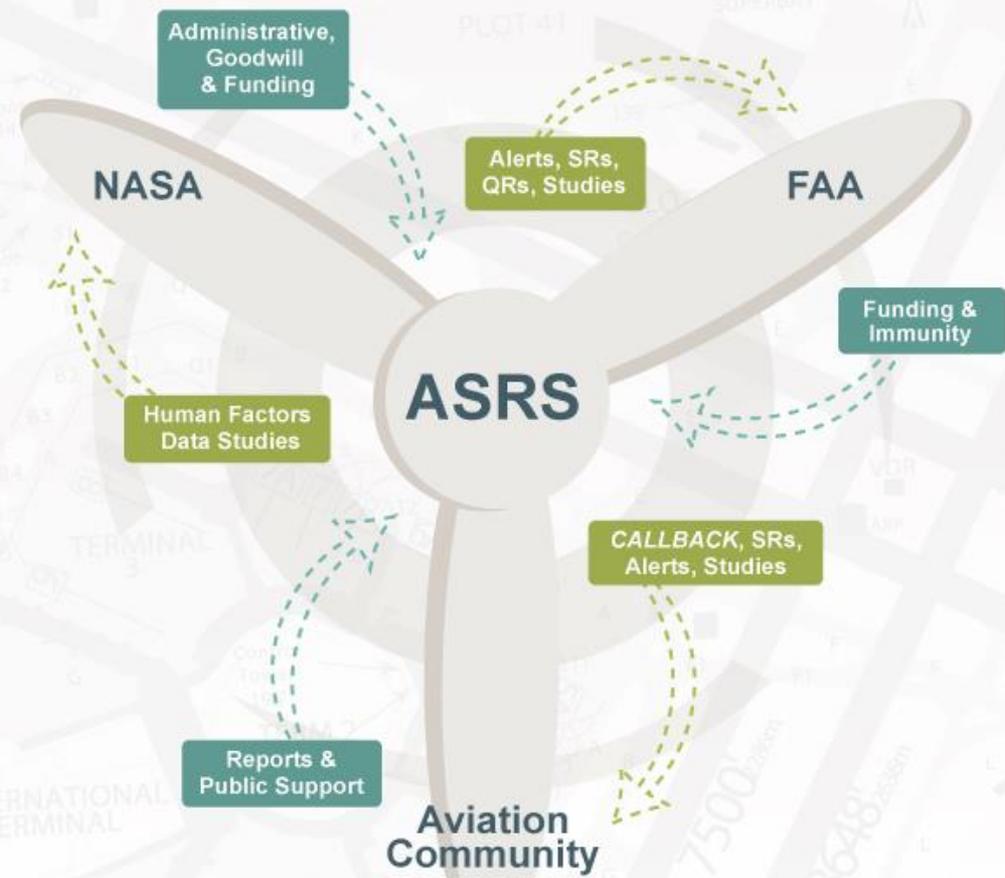
The Aviation Safety Reporting System (ASRS) receives, processes and analyzes voluntarily submitted incident reports from pilots, air traffic controllers, dispatchers, cabin crew, maintenance technicians, and others. Reports submitted to ASRS may describe both unsafe occurrences and hazardous situations. Information is gathered from these reports and disseminated to stakeholders. ASRS's particular concern is the quality of human performance in the National Airspace System.

Reporting Incentives

- Voluntary
- Confidential
- Non-punitive



ASRS Stakeholders



Purpose

- **Identify deficiencies and discrepancies in the National Airspace System**
 - Objective: Improve the current aviation system
- **Provide data for planning and improvements to the future National Airspace System**
 - Objective: Enhance the basis for human factors research & recommendations for future aviation procedures, operations, facilities, and equipment



Documents Governing ASRS Immunity & Confidentiality

- Federal Register Notice, 1975 & 1976
- Federal Aviation Regulations Part 91.25 (14 CFR 91.25)
- FAA Advisory Circular 00-46E
- FAA policy concerning Air Traffic Controllers regarding ASRS reporting, FAA Order JO 7200.20



FAA Limited Immunity Provisions

Paragraph 9. c. FAA Advisory Circular No. 00-46E

C. Enforcement Restrictions. The FAA considers the filing of a report with NASA concerning an incident or occurrence involving a violation of 49 U.S.C. subtitle VII or the 14 CFR to be indicative of a constructive attitude. Such an attitude will tend to prevent future violations. Accordingly, although a finding of violation may be made, neither a civil penalty nor certificate suspension will be imposed if:

1. The violation was inadvertent and not deliberate;
2. The violation did not involve a criminal offense, accident, or action under 49 U.S.C. § 44709, which discloses a lack of qualification or competency, which is wholly excluded from this policy;
3. The person has not been found in any prior FAA enforcement action to have committed a violation of 49 U.S.C. subtitle VII, or any regulation promulgated there for a period of 5 years prior to the date of occurrence; and
4. The person proves that, within 10 days after the violation, or date when the person became aware or should have been aware of the violation, he or she completed and delivered or mailed a written report of the incident or occurrence to NASA.



Report Processing



Report Intake Overview

ASRS receives reports from pilots, air traffic controllers, cabin crew, dispatchers, maintenance technicians, and others involved in aviation operations.

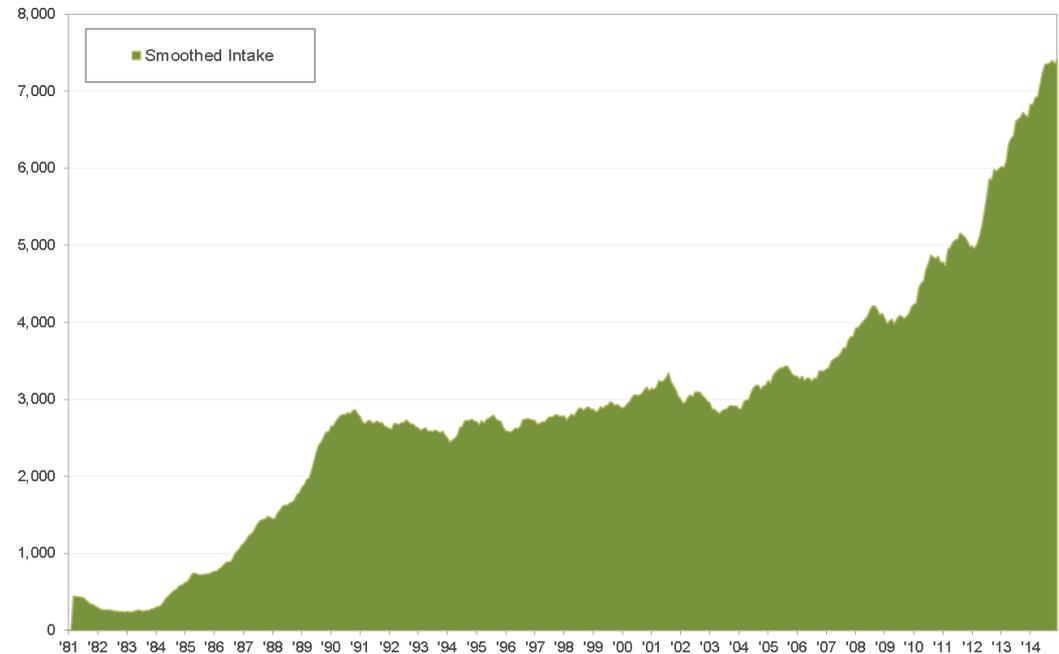
ASRS's report intake has been robust from the first days of the program, in which it averaged approximately 400 reports per month. In recent years, report intake has grown at an enormous rate. Intake now averages 1,800 reports per week and 7,500 reports per month.



ASRS Report Volume Profile

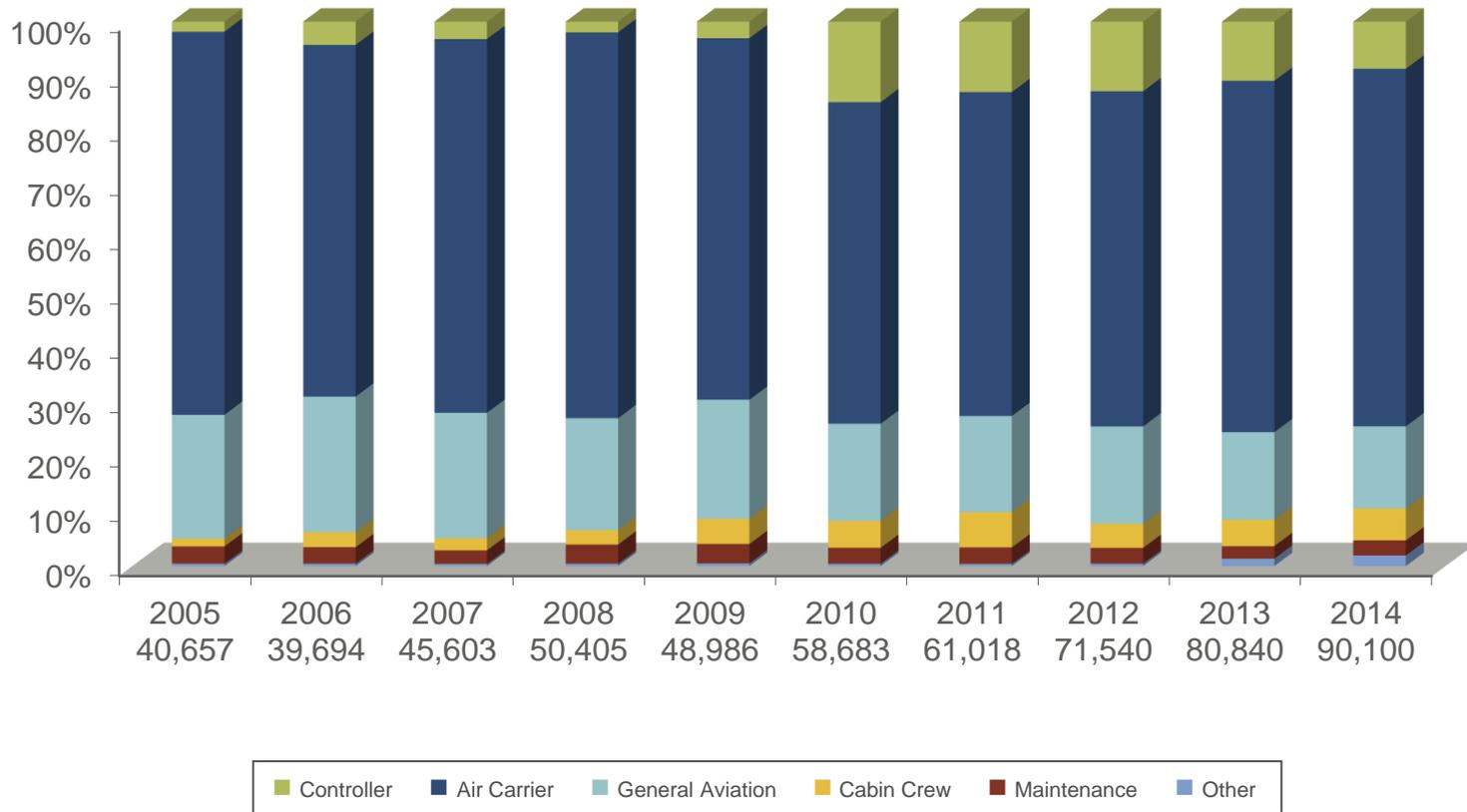
- Total Program Report Intake = **1,230,602**
- Total Report Intake for 2014 = **90,100**
- An increase of 329% since 1988
- Averaging ~ 7,500 reports per month, 360 per working day

Monthly Intake
January 1981 – December 2014



Incident Reporter Distribution

January 2005 – December 2014



Report Processing Overview

ASRS has securely processed over one million reports in its 39 year history. The process contains critical elements that ensure each report is handled in a manner that maintains reporter confidentiality while maximizing the ability to accurately assess the safety value of each report. ASRS report processing begins with the receipt of reports through electronic submission or from the post office, and ends with the final coded report entered into the ASRS Database.

Reports sent to the ASRS are widely regarded as one of the world's largest sources of information on aviation safety and human factors.



Report Processing Flow

Airline Safety Action Program (ASAP) and Air Traffic Safety Action Program (ATSAP) reports

Direct ASRS



ASRS Staff

The ASRS Staff is composed of highly experienced pilots, air traffic controllers and mechanics, as well as a management team that possess aviation and human factors experience. ASRS Analysts' experience is comprised of over 470 cumulative years of aviation expertise covering the full spectrum of aviation activity: air carrier, corporate, military, and general aviation; Air Traffic Control in Towers, TRACONs, Centers, and Military Facilities. Analyst cumulative flight time exceeds 140,000 hours in over 50 different aircraft.

In addition, the ASRS Staff has human factors and psychology research experience in areas such as crew resource management, training, fatigue, user interface design, usability evaluations, and research methodology.



ASRS Products & Services



Alert Messages

Safety information issued to organizations in positions of authority for evaluation and possible corrective actions.



CALLBACK

Monthly newsletter with a lessons learned format, available via website and email.



Quick Responses

Rapid data analysis by ASRS staff on safety issues with immediate operational importance generally limited to government agencies.



ASRS Directline

Safety topic summaries based on ASRS reports published to meet the needs of operators and flight crews.



ASRS Database

The public ASRS Database Online and data available in Database Report Sets or Search Requests fulfilled by ASRS staff.



Focused Studies/Research

Studies/Research conducted on safety topics of interest in cooperation with aviation organizations





Alert Messages

Alert Message Overview

When ASRS receives a report describing a hazardous situation, for example, a defective navigation aid, an aircraft system anomaly, a confusing procedure, or any other circumstance which might compromise safe flight – an Alert Message is issued using de-identified information provided in the reports.

Alert Messages have a single purpose: to relay safety information to organizations in positions of authority so that they can evaluate the information and take possible corrective actions.

Alert Messages are classified as **Alert Bulletins** or **For Your Information Notices**, and may be included in monthly **ASRS Safety Teleconferences**.



ASRS Alert Messages & Telecons



ASRS has no direct authority to correct safety issues.
It acts through and with the cooperation of others.



Alert Message Metrics

January 2005 – December 2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alert Bulletins Issued	79	75	63	40	30	43	50	40	44	50
FYI Notices Issued	129	117	279	235	206	222	151	177	129	109
Response Rate to AB/FYI	32%	35%	49%	46%	38%	34%	29%	27%	28%	48%
Response Rate Non-Manufacturer	45%	55%	64%	55%	26%	36%	38%	25%	37%	73%



Alert Message Responses

2004 – 2014*

Response	Percentage
Action taken as a result of the AB/FYI	24%
Action initiated before AB/FYI received	14%
Action initiated in response to AB/FYI but not completed	10%
Issue raised by AB/FYI under investigation	5%
Addressee agrees with AB/FYI but sees no problem	5%
Addressee in factual agreement but is unable to resolve	3%
Addressee disputes factual accuracy of AB/FYI	21%
Information in AB/FYI insufficient for action	13%
Action not within addressee's jurisdiction	3%
For information only, no response expected	2%

60%

n = 957



Sample Responses To Alert Messages

- **Solar Array Inflight Visibility Glare (AB 2014:11)**
An FAA (AJV-W22), Air Traffic Control Specialist responded and stated “...the Aeronautical Charting Forum has agreed to install a designation on charts for requested solar power plants. Presently, we have two large Concentrated Power Plant (CSP), Ivanpah and Tonopah. Both, sites will soon have charted a “SOLAR PLANT” marker in addition to the obstruction symbol.”
- **B737 NG WiFi Interference on VHF Com1 Radio (AB 2014:12)**
An FAA Air Carrier Maintenance, Aviation Safety Inspector responded and stated "The information was useful in the ASRS report that was sent. I forwarded to the Seattle AEG personal that deal with the model in question. Also forwarded to the ASI's who have carriers with this model acft. In doing this, we bring important safety information directly to the ASI's responsible for over site."
- **PC-12 Runaway Stabilizer Trim Warning Horn (AB 2014:37)**
A Pilatus Aircraft representative responded stating "Pilatus has carefully analyzed all available information and concluded that the underlying event was a particular malfunction mode of a trim relay which led to an active trim runaway warning without an actual trim runaway. The crew action to silence the warntone then masked the actual runaway which occurred shortly afterwards. The warntone and its volume are considered appropriate. Although considered a rare event, Pilatus has amended the trim runaway procedures in the emergency section of the AFM mentioning the possibility of a warntone only."





Quick Responses

Quick Response Overview

Quick Responses are rapid turnaround data analysis that are typically accomplished within two to ten business days of the request. They are a high value service directed towards safety issues with immediate operational importance. Quick Responses are generally limited to government agencies such as FAA, NTSB, NASA, and U.S. Congress.



Recent Quick Response Efforts

- An Analysis of General Aviation ADS-B Related Incidents (QR340)
- An Analysis of Part 121 Similar Call Sign Related Incidents (QR339)
- An Analysis of Part 121 Flight Crew Fatigue Related Incidents (QR338)
- An Analysis of Dual Turboprop Engine Aircraft Icing Encounter Incidents (QR337)





ASRS Database



ASRS Database Access

1. Information in the ASRS Database is available publicly. The ASRS will provide **Search Requests** to government agencies, members of Congress, aviation safety organizations, and others. ASRS will search its database, download relevant reports, and send to requestor.
2. Direct access to search de-identified reports in the ASRS database is now available through **ASRS Database Online** <http://asrs.arc.nasa.gov/search/database.html>
3. For your convenience, selected relevant reports on several safety topics are available on the website called **ASRS Database Report Sets** <http://asrs.arc.nasa.gov/search/reportsets.html>
4. The ASRS Database is also available and updated monthly through the FAA Aviation Safety Information Analysis and Sharing (ASIAS) website <http://www.asias.faa.gov/>



ASRS Database Metrics

- Since the inception of ASRS, over 7,400 **Search Requests** (SRs) have been directly provided by ASRS research staff to various aviation organizations, agencies, and individuals through December 2014
- The activity on the ASRS website for **ASRS Database Online** is over 1,500 completed queries a month
- From the ASRS website, **ASRS Database Report Sets** are downloaded on average over 3,600 times a month. Report Sets were first posted in January 2000.



Search Requestors by Organization

January 2005 – December 2014

Organization	Total
FAA	246
NASA	78
Air Carriers	77
NTSB	62
Media	51
Alphabet Groups	59
Miscellaneous Safety Organizations	24
Other	22
Research Organizations	17

Organization	Total
Individuals	17
Aircraft Manufacturers	17
Students	16
Law Firms	6
Miscellaneous Government	5
Military	5
Educational Institutes	5
Foreign	4
DHS	1



Recent Search Request Examples

- **Unmanned Aerial Vehicle (UAV) Related Incidents (SR 7176)**
 - Completed for the CIA

- **Pre-Takeoff Air Carrier Runway Change Related Incidents (SR 7168)**
 - Completed for the NTSB

- **Air Carrier Wrong Airport Approach/Landing Related Incidents (SR 7155)**
 - Completed for The Associated Press

- **SFO Approach Related Incidents (SR 7104)**
 - Completed for the NTSB





CALLBACK

CALLBACK Overview

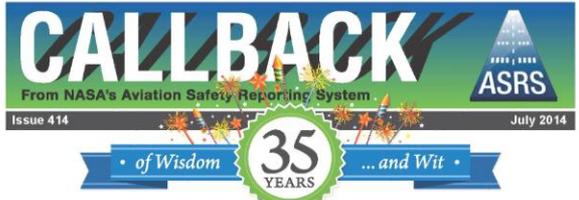
CALLBACK, the award winning ASRS monthly safety newsletter, has been published since 1979 in a popular “lessons learned” format. *CALLBACK* presents ASRS report excerpts that are significant, educational, and timely. Occasionally features on ASRS program developments and research are also presented. Over 420 issues have been published and distributed throughout the U.S. and the international aviation community. All issues since December 1994 are available at the ASRS website at:

<http://asrs.arc.nasa.gov/publications/callback.html>



CALLBACK Distribution and Subscription

- In addition to being published online, *CALLBACK* is distributed by email. Subscription is free and available via the ASRS website. In July of 2014, *CALLBACK* celebrated its 35th Anniversary.
- The total number of email subscribers for 2014 was over 26,500
- *CALLBACK* website views for 2014 (HTML and PDF) were nearly 300,000



CALLBACK
From NASA's Aviation Safety Reporting System
ASRS
Issue 414 July 2014
• of Wisdom 35 YEARS ... and Wit •

Dear Readers:
July 2014 marks another proud milestone for the Aviation Safety Reporting System, the 35th anniversary of *CALLBACK*. Captain Rex Hardy, a decorated Naval Aviator and corporate test pilot, created the monthly safety bulletin, *CALLBACK* in 1979. Rex's vision of a short, readable, and informal format to present the ASRS "lessons learned" was an immediate success. With his insight, talent, and determination, *CALLBACK* evolved into a widely recognized, award-winning publication. When Rex Hardy retired after producing the first 100 issues, the very capable and talented Dr. Rowena Morrison was able to step in and carry on the intent and spirit of Rex's creation for 230 more issues.

Perhaps this letter from a reader offers the best tribute to the efforts of all the people at ASRS who have contributed to 35 successful years of *CALLBACK*.

"I congratulate the ASRS staff for continually producing one of the finest aviation safety tools in the industry. The quality is in your editing—nice use of themes, narratives always to the point without scolding. The slick magazines have similar products... [and] serve a useful purpose, to be sure. But it is only 'Callback' which makes my spine tingle and butterflies fly in my stomach when I think, 'That could have been ME,' as I read the narratives each month. Please know the widespread appreciation we in the piloting community feel for your fine work. 'Callback' is a great return for what I am sure is a miserly amount of tax funding. Some other agencies could take a lesson from you folks."
—J.U.

We appreciate the kind words, but we also recognize that it is the generous input from people who are willing to share their observations and lessons learned that constitutes the heart of *CALLBACK*. The entire aviation community is indebted to every person who takes the time to submit a report to ASRS.

—Don Faridy, Editor

Many ASRS reports include a statement about the lesson (or lessons) learned by the reporter. Rather than the usual report narratives, this anniversary issue of *CALLBACK* presents several important lessons culled from reports submitted to NASA's Aviation Safety Reporting System.

Taking the time to share a lesson learned is a good thing and, as mentioned earlier, we appreciate all of the reports submitted to ASRS. By heeding the advice offered below, however, you may avoid an error or incident.

— Words of Wisdom from 35 Years of *CALLBACK* —

— Time Pressure —

- My first mistake came from reacting much too quickly. Take your time. Run the checklist when appropriate. Verify important switches with the other pilot before you move them.
- To the extent possible, always get prepared on the ground, not while in the air. Don't let external pressures make you rush to do something without being thoroughly prepared.
- I was making a rushed approach to land. I have learned that when I am rushed is when I really need to take the time for the checklist.
- Automation —
- I have learned a valuable lesson about my responsibility to make timely inputs to the aircraft when I realize that the automation isn't doing what I expect it to do.
- Aircraft are machines subject to malfunction and we pilots who operate them are humans subject to human error. As a pilot who plans on remaining on the line, I have learned a valuable lesson—monitor the autoflight system like a hawk.



Aviation Community Feedback 2014

■ Sample comments Readers

- *“I love the interactive Callback issues because it gives one the opportunity to pause, consider possibilities, make a decision and then see what another pilot(s) has done. While I'm sure it takes more time to create/edit the interactive Callback issues, they're great!”*
- *“I have been a faithful reader of Callback for years. I particularly find valuable those articles describing incidents, or near incidents, and how disastrous events were averted. Keep up the great work!”*
- *“While I count seconds daily in my world, I NEVER fail to read an ASRS issue as you are shooting the lights out in promoting aviation safety by spreading the wisdom. I truly value your input which still makes me a better pilot every time I read an ASRS report.”*





ASRS Directline



ASRS “Directline” Publication

ASRS “Directline” is another award-winning ASRS publication. Although not currently published, this safety journal had an estimated readership of 20,000. Ten issues have been published since 1991 with an average of three to five articles per issue. All issues are available for download at the ASRS website at:

<http://asrs.arc.nasa.gov/publications/directline.html>

The feasibility of producing this publication again in the near future is being assessed.





Focused Studies/Research

Focused on Operations and Human Factors

- 64 Research Studies and Special Papers Prepared by NASA ASRS
 - **Operations:** Deviations, De-Icing/Anti-Icing, Rejected Takeoffs, Clearances, Weather Encounters, Landing Incidents, Runway Transgressions, TCAS II, Crossing Restrictions, etc.
 - **Human Factors:** Communication, Memory, Confusion, Time Pressure, Judgment, Training, Crew Performance, Flight Crew Monitoring, etc.
 - **Confidential Reporting:** ASRS Reporting Model, Case for Confidential Reporting, Development of ASRS, Cross Industry Applications, etc.
- Research agendas are developed in collaboration with government and industry safety organizations
- There are over 30 ASRS Research Papers available on the ASRS website

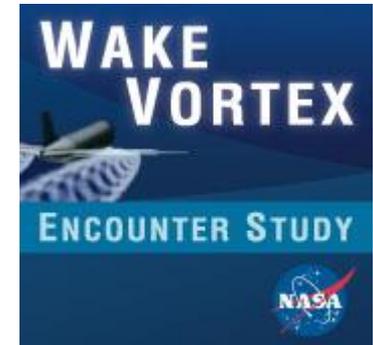


Structured Callback: Supplemental Question Set

Wake Vortex Encounter Study

In collaboration with the FAA, NASA ASRS is currently examining Wake Vortex Encounter incidents reported to ASRS. ASRS began this study in 2007. At present the Wake Vortex Encounter Study includes all airspace within the United States, enroute and terminal. In quarterly reports, the ASRS documents event dynamics and contributing factors underlying unique wake vortex encounter incidents.

A sampling of the factors to be analyzed includes reporters assessment of wake encounter magnitude, aircraft spacing, aircraft type, runway configuration, and consequences from the encounter.



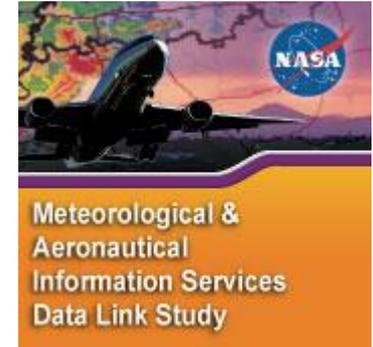
Structured Callback: Supplemental Question Set

Meteorological and Aeronautical Information Services Data Link Services and Applications Study

In collaboration with the FAA, NASA ASRS is currently conducting a study focused on meteorological and aeronautical information services (AIS) via data link. ASRS is receiving reports of incidents that occurred while pilots were utilizing weather or AIS information in the cockpit (textual and/or graphical) obtained via data link (including ACARS) or other sources on the ground or in the air.

Some factors to be analyzed include type of weather data received, cockpit display utilized, software or applications used to receive meteorological information, and end user graphical interface issues.

In March of 2012 an interim report was published and is now available on the ASRS website.



ASRS Summary

ASRS is a highly successful and trusted program that has served the needs of the aviation community for over 39 years. It is available to all participants in the National Airspace System to report safety incidents and situations.

The ASRS identifies system deficiencies and issues Alert Messages to organizations in a position to correct them. ASRS provides education through its newsletter, *CALLBACK*, its journal, “Directline”, and through its research studies. The ASRS Database is a public repository which serves the needs of the FAA, NASA, and other organizations world-wide which are engaged in research and the promotion of safe flight.



Why Confidential Reporting Works

- When organizations want to learn more about the occurrence of events, the best approach is simply to ask those involved
- People are generally willing to share their knowledge if they are assured
 - Their identities will remain protected
 - There is no disciplinary or legal consequences
- A properly constructed *confidential, voluntary, non-punitive* reporting system can be used by any person to safely share information
- Confidential reporting systems have the means to answer the question *why* - why a system failed, why a human erred
- Incident/event data are complementary to the data gathered by other monitoring systems

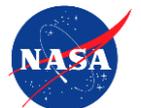


Advantages of the ASRS Model

- System-Wide Perspective
- System-Wide Alerting
- Data Processing through Expert Analysts
- Comprehensive and Time Tested Coding Taxonomy
- Strong Immunity and Legal Provisions
- Information Sharing on Safety/Security
- National and International Reputation



Application of the ASRS Confidential Reporting Model



ASRS Model for Aviation Safety

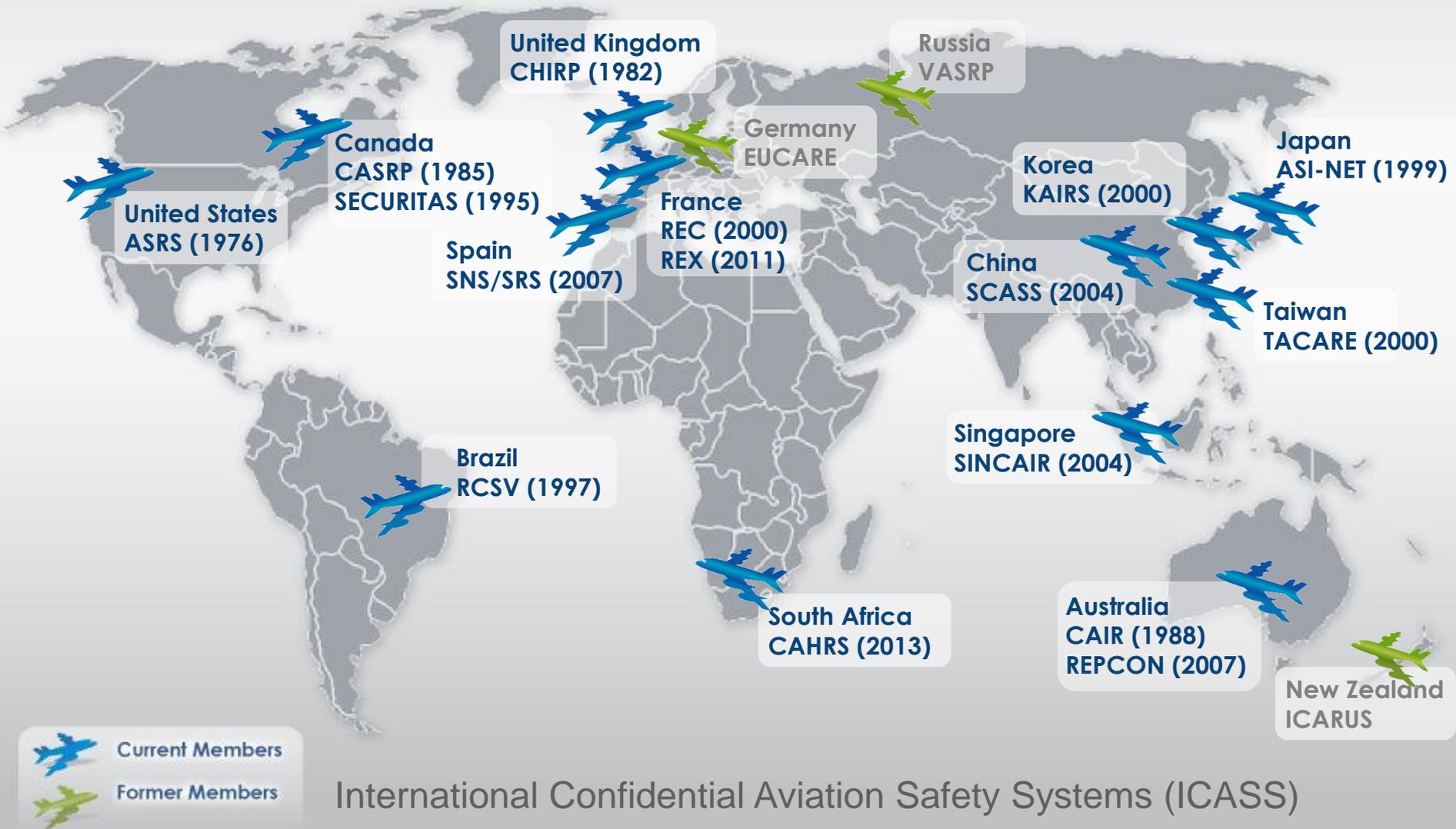
The ASRS model is utilized internationally in the aviation community. The International Confidential Aviation Safety Systems (ICASS) group promotes confidential reporting systems as an effective method for enhancing flight safety in commercial air transport and general aviation operations.

International Civil Aviation Organization (ICAO) has revised Annex 13 – Accident Prevention and created Annex 19 which addresses member states establishing a voluntary incident reporting system as a Standard.

Because of the success of ASRS, there is also a growing interest in utilizing the ASRS reporting model for application to other disciplines such as medicine, railroad, maritime, security, and others.



ASRS Model Applied to International Aviation Community



International Confidential Aviation Safety Systems (ICASS)

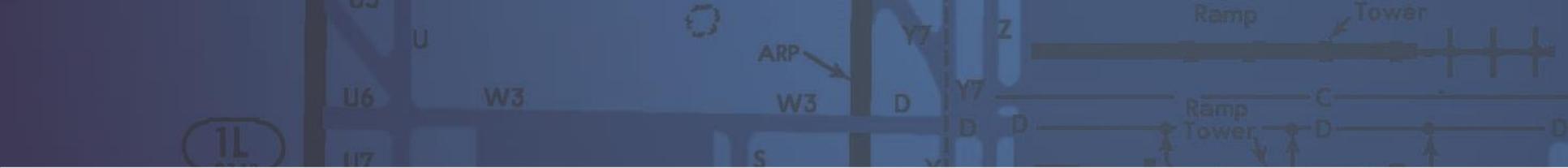
ASRS Model Applied to Railroad Safety



Confidential Close Call Reporting System (C3RS)

A Confidential Close Call Reporting System to improve railroad safety. C3RS is a partnership between railroad carriers, railroad labor organizations, NASA, and the Federal Railroad Administration (FRA). (2010 to present)





- **Contact the NASA Program Director**

- Linda Connell

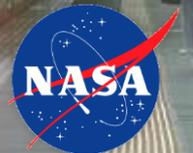
linda.j.connell@nasa.gov





CONFIDENTIAL CLOSE CALL
REPORTING SYSTEM

C³RS 2015



C³RS – Established at NASA Ames

- The NASA Confidential Close Call Reporting System (C³RS) was established with the FRA in 2010 through an IAA between NASA and the Department of Transportation's Federal Railroad Administration (FRA). C³RS is designed to improve railroad safety by collecting and studying reports detailing unsafe conditions or near miss events in the railroad industry.



C³RS Concept and Mission

- The C³RS is a voluntary process wherein engineers, conductors, dispatchers, carmen, machinists, signal maintainers and any other individual associated with the operation of the railroad system may report events or incidents that have been experienced or witnessed as safety hazards.
- The C³RS confidential safety reporting system includes the processing of reports, specific de-identification protocols to protect the identity of the person reporting and the rail carrier, identification of safety hazards, analysis of data (qualitative and quantitative), operation and maintenance of a large database, and presentation of findings based on the accumulated safety data and information.



NASA's C³RS Role Defined

Intergovernmental Partnership

- Interagency Agreement between FRA and NASA
 - Utilize NASA's knowledge and experience
 - To maximize the underlying trust of people working in rail industry to report safety events
 - Confidentiality, and ultimately anonymity, will result in improved reporting
 - Provide external and independent reporting avenue



NASA's C³RS Role Defined

Public/Private Partnership

- IMOU between FRA and Carriers states:
 - NASA shall act as owner of the data reported by employees
 - NASA shall protect the confidentiality of this information through its own governance
 - NASA will de-identify data so that employee's identity and any third party reference can be determined through direct or indirect means.



Programmatic Growth

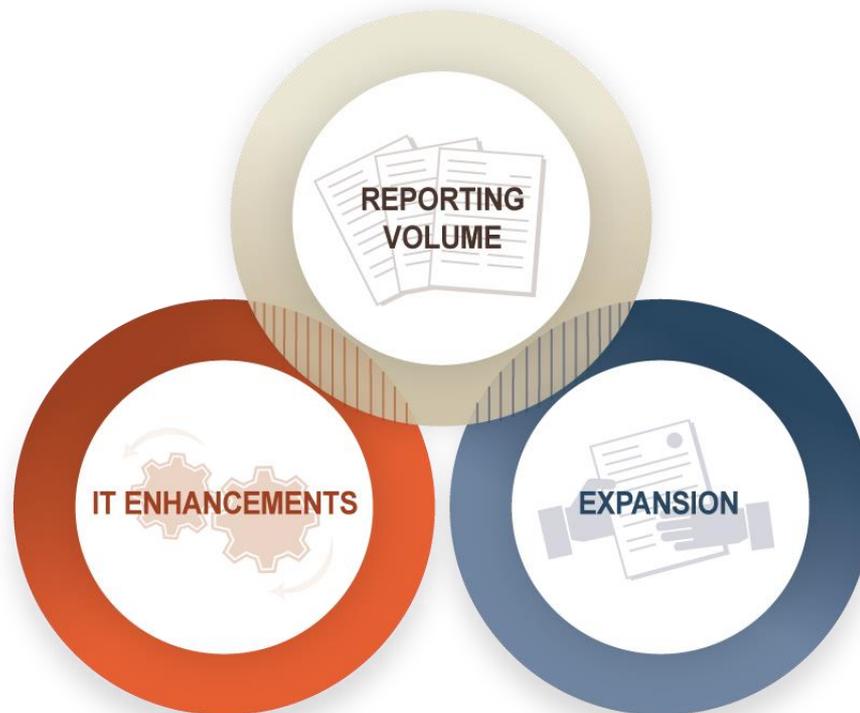
REPORTING VOLUME

Volume is increasing rapidly and new carriers will also increase intake numbers

EXPANSION

More rail carriers and crafts are on the horizon with advocacy from highest levels of FRA and industry.

Additional products such as newsletter, special studies, and alerts



IT ENHANCEMENTS

Enhancements, such as specific report forms for crafts, Peer Review Team (PRT) web portal, Analyst Workbench, and database development



Rail Carrier Participants Timeline



Reporting to NASA C³RS

<http://c3rs.arc.nasa.gov>

CONFIDENTIAL CLOSE CALL REPORTING SYSTEM

Home Program Information **Report to C³RS** Publications Online Resources Contact Us

Welcome to the NASA Confidential Close Call Reporting System!

The Confidential Close Call Reporting System (C³RS) is a partnership between the National Aeronautics and Space Administration (NASA), the Federal Railroad Administration (FRA), participating railroad carriers and labor organizations. It is designed to improve railroad safety by collecting and studying reports detailing unsafe conditions and events in the railroad industry. Employees will be able to report safety issues or "close calls" voluntarily and confidentially.

Learn More

Learn about the Confidential Close Call Reporting System, such as program policies and report processing method.

[Read more](#)

Report to C³RS

File your close call event today!

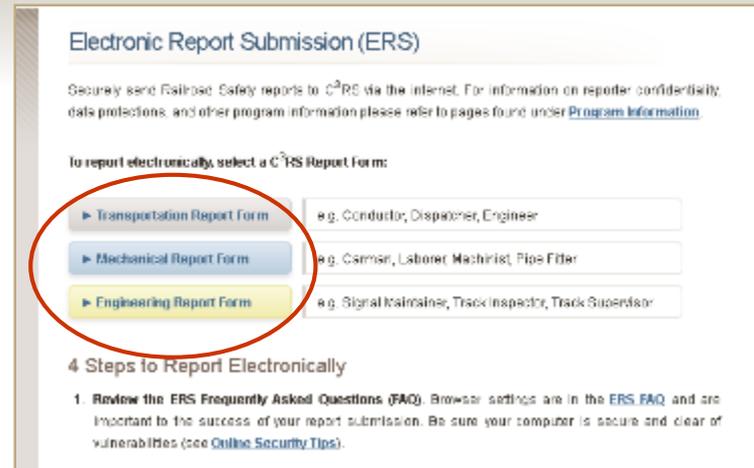
- [Electronic Report Submission \(ERS\)](#)
- [Download and Print for US Mail](#)

C³RS Website Administrator: [Mariana Carmona](#) | NASA/C³RS Director: [Linda Connell](#)
[NASA Privacy Statement](#) | [NASA Home](#) | [NASA Ames](#)



C3RS Website (Secure Electronic Submission)

- Choose a report type
- Fill out completely
- *IF* a copy is retained for your records, print “before” submitting
- As proof of submission, NASA C³RS provides an electronic verification code to you after SUBMIT



Electronic Report Submission (ERS)

Securely send Railroad Safety reports to C³RS via the internet. For information on reporter confidentiality, data protections, and other program information please refer to pages found under [Program Information](#).

to report electronically, select a C³RS Report Form:

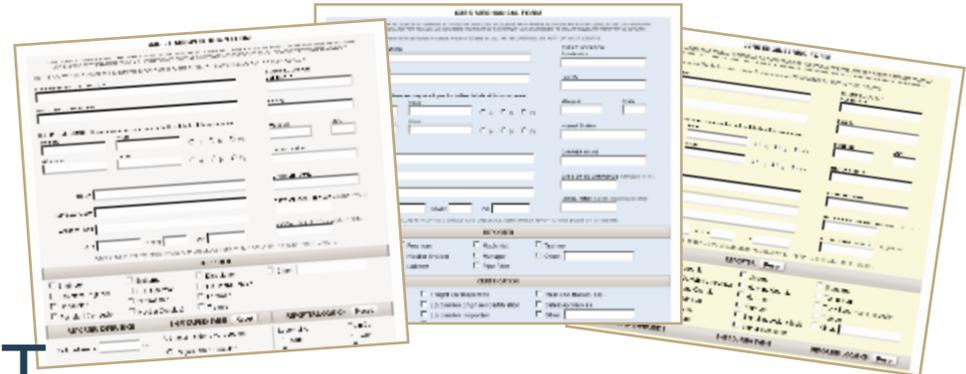
Transportation Report Form e.g. Conductor, Dispatcher, Engineer

Mechanical Report Form e.g. Carman, Laborer, Machinist, Pipe Fitter

Engineering Report Form e.g. Signal Trainee, Track Inspector, Track Supervisor

4 Steps to Report Electronically

1. Review the ERS Frequently Asked Questions (FAQ). Browser settings are in the ERS FAQ and are important to the success of your report submission. Be sure your computer is secure and clear of vulnerabilities (see [Online Security Tips](#)).



Transportation

Mechanical

Engineering



C3RS Website (Mailed Paper Report)



CONFIDENTIAL CLOSE CALL REPORTING SYSTEM

Home Program Information **Report to C3RS** Publications Online Resources Contact Us

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Learn More
Learn about the Confidential Close Call Reporting System, such as program policies and report processing method.
Read more

Report to C³RS
File your close call event today!
Electronic Report Submission (ERS)
Download and Print for US Mail

C³RS Website Administrator: Mariana Carmona | NASA/C³RS Director: Linda Connell
NASA Privacy Statement | NASA Home | NASA Ames



Download & Print for US Mail

The NASA C³RS Report Forms are provided here as PDF letter-size (8 1/2 x 11) documents that you may download, fill out, print and mail to C³RS. A third page has been added for additional narrative, if desired.

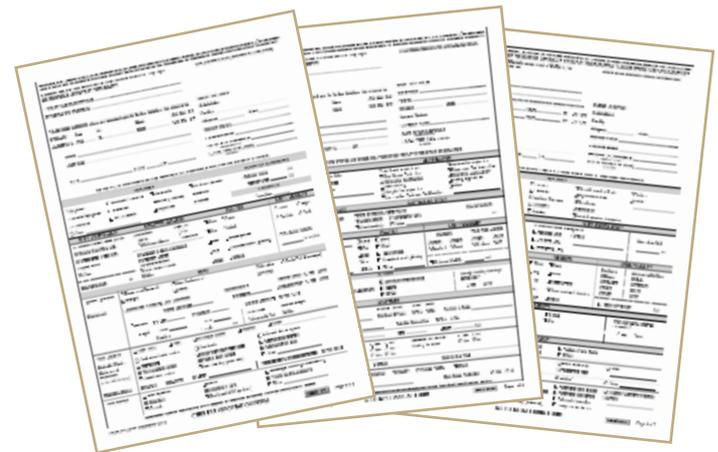
To download & print, select a C³RS PDF Report Form:

- Transportation Report Form** e.g. Conductor, Dispatcher, Engineer
- Mechanical Report Form** e.g. Carman, Lubener, Machinist, Pipe Fitter
- Engineering Report Form** e.g. Signal Maintainer, Track Inspector, Track Supervisor

2 Steps to Report through US Mail

Click on the appropriate report form link above - your browser should start the file Adobe® Acrobat Reader®. If not, download the form and start Adobe® Acrobat Reader® manually. You have two choices for submitting a C³RS incident report:

- Choose correct PDF form
- Fill out completely & print
- Postage is required
- 5 to 7 Days for mail



Transportation Mechanical Engineering



Report Processing



Report Intake

- Since the Go Live Date of February 1, 2011 the total number of NASA C³RS reports received is:

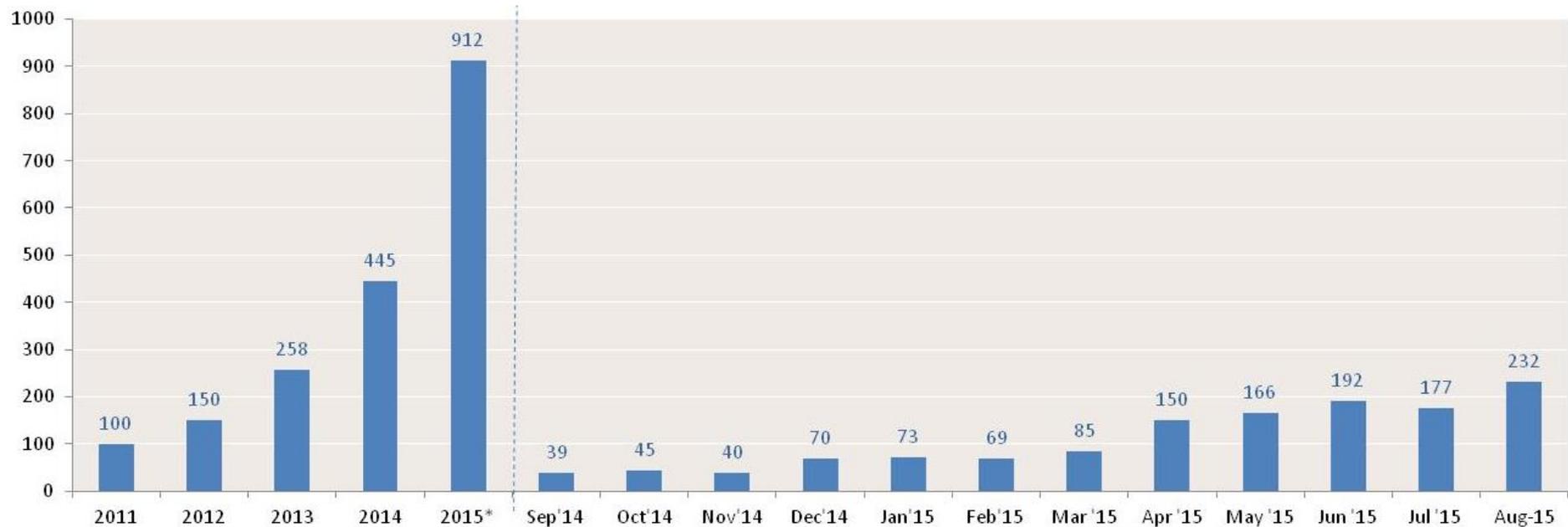
2097*

A 3D illustration of a stack of papers, representing the total number of reports received. The stack is composed of many thin, white pages, with the top page showing some faint text and lines. The stack is rendered with a slight shadow and perspective, giving it a three-dimensional appearance.

*As of August 31, 2015



Year over Year Report Volume Comparison

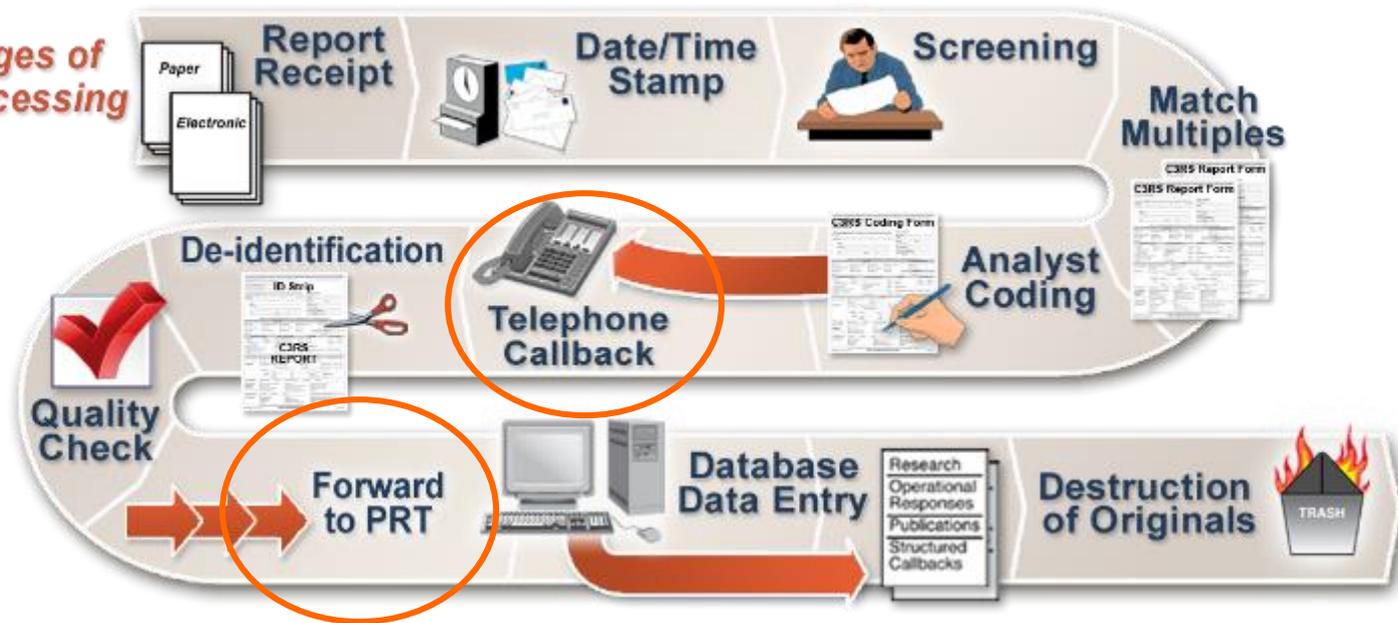


*Report Intake for 2015 thru August 31, 2015.



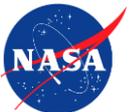
C3RS Report Processing

Initial Stages of Report Processing



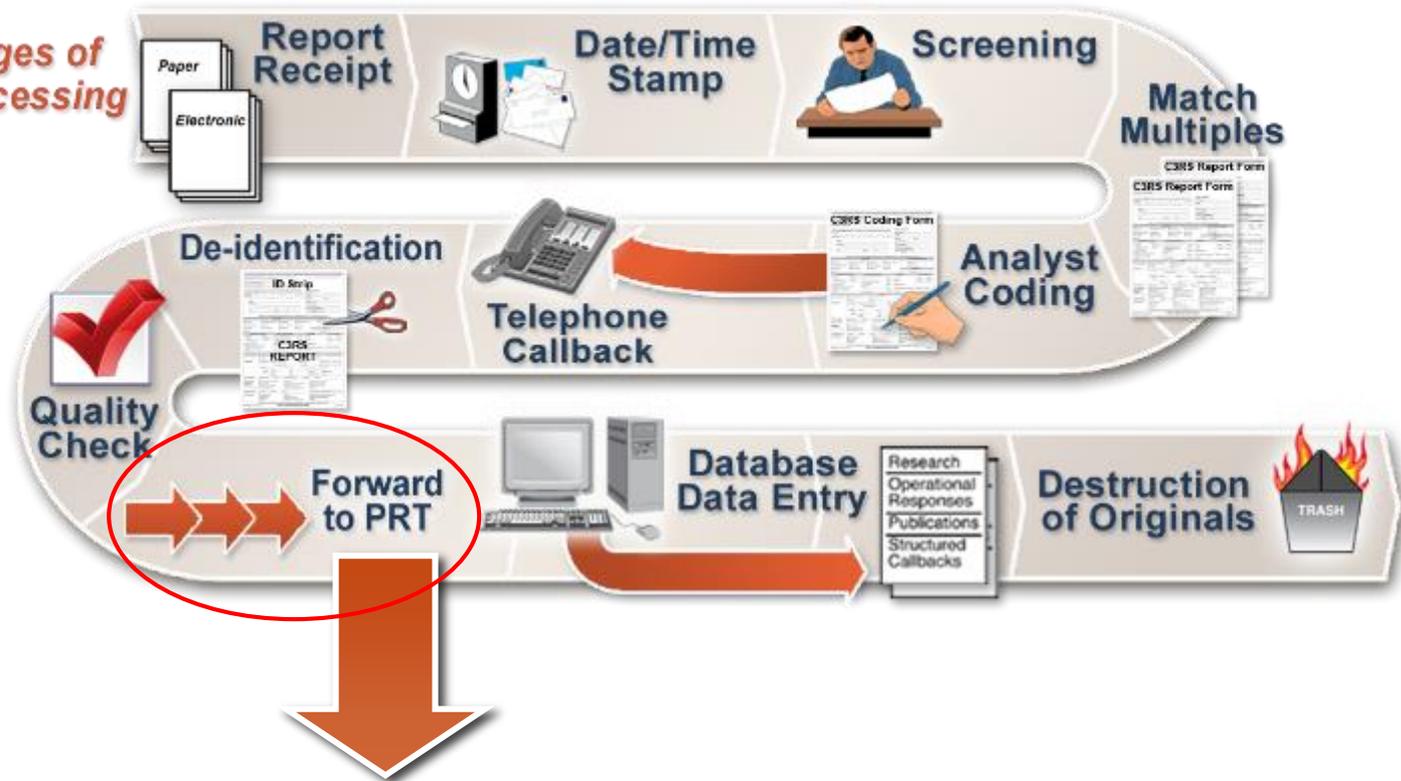
Telephone Callback

- Initial contact will be attempted soon after receipt of report @ NASA
 - Normally, a 5 to 10 minute phone call
- If no contact, the NASA C³RS Analyst will make one more attempt to contact reporter at later time
- If no contact on second try, letter is sent to encourage person to contact C³RS directly
- If reporter does not contact us – original report is de-identified and released to carrier's Peer Review Team (PRT). Date stamped ID strip returned to person who reports

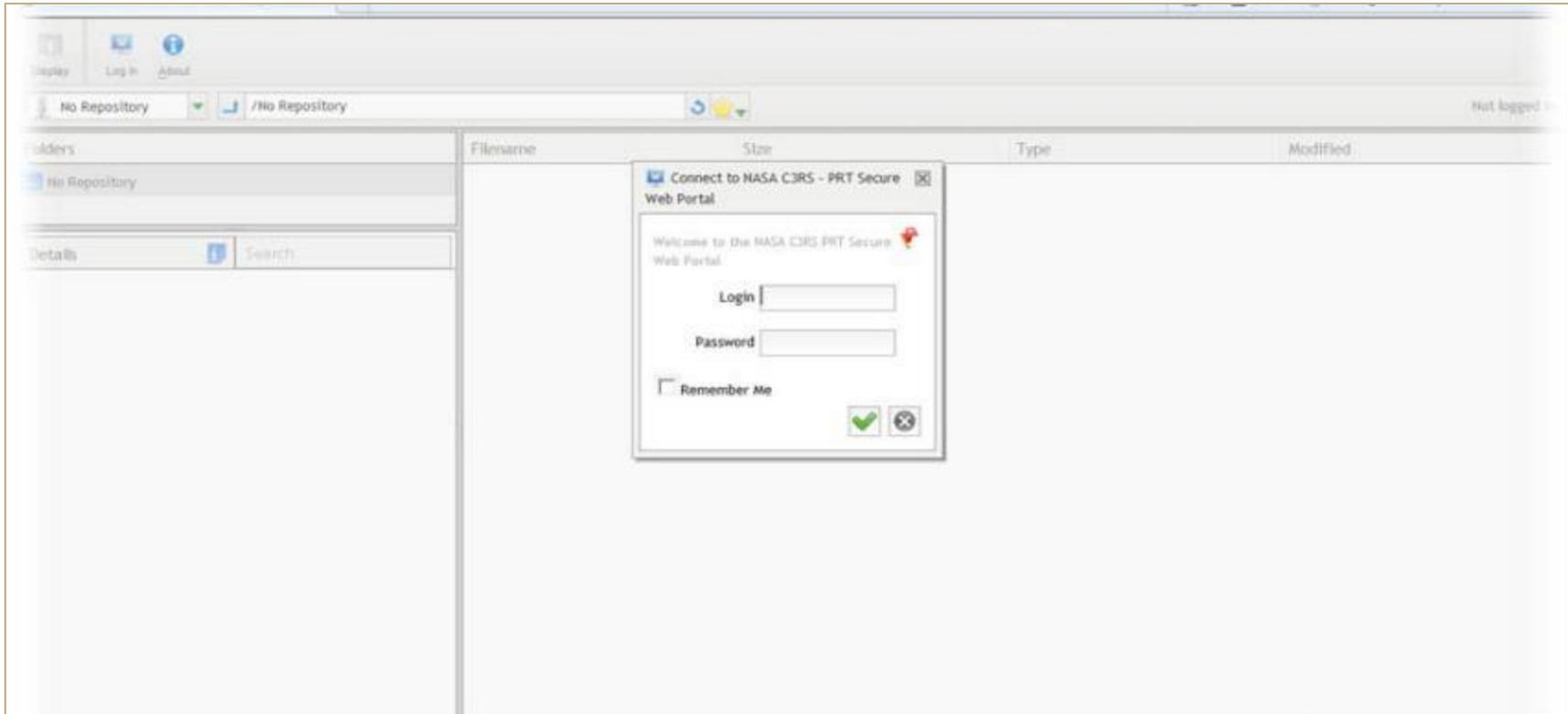


Carrier's Peer Review Team Reports

Initial Stages of Report Processing



NASA C³RS PRT Web Portal



Materials / Supplies

- Feedback to NASA is welcome and appreciated
!!!! Check out website @ <http://c3rs.arc.nasa.gov>
- Keep handout locations well supplied with reporting forms. Contact NASA C³RS for supplies



Linda Connell, NASA
ASRS/C³RS Program Director
linda.j.connell@nasa.gov

