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United States Aviation Safety Data: Uses and Issues Related to Sanctions and Confidentiality

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I. INTRODUCTION

THE WORLDWIDE commercial aviation accident rate has remained relatively constant during the past decade. For 40 years prior to this period, however, the global aviation industry maintained a positive rate of improved safety. Innovations in aircraft technologies and improved flight crew training programs are among the factors widely credited for this long-term favorable trend; yet, more remains to be done. Even if the current accident rate continues, it is inevitable that there will be a larger number of accidents in the future if the industry's predicted growth in the international aviation fleet and expansion of air service materializes.

Of course, many initiatives exist with the goal of reducing the accident rate. For instance, the White House Commission on Aviation Safety and Security established a U.S. goal of reducing the fatal accident rate by 80 percent in 10 years following the 1994-96 baseline.1

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The global aviation industry recognizes that future reductions in commercial aircraft accidents will require knowledge sharing systems and legislation that supports the collection and sharing of airline safety information. A key strategy for sustained reductions in commercial aircraft accidents is to study contributing factors that lead to human error. Airlines, government agencies, and other professional organizations are pursuing strategies for developing systems that reduce the potential of airline accidents. In order to mitigate potential human error, the industry needs "information on the day to day operational difficulties, stresses and human failures that flight crew, cabin crew, air traffic controllers, aircraft dispatchers and maintenance personnel experience on every one of their working days." Improving airline safety by mitigation of human error requires the collection, analysis, and use of data and information related to the day-to-day operational difficulties experienced by the global airline industry. Therefore, many airlines, government agencies, and other professional organizations are now advocating the development of global aviation or airline safety data and information sharing systems.

As a case in point, in 1997, the U.S. National Civil Aviation Review Commission ("NCARC") encouraged the development of voluntary aviation safety information sharing systems. According to NCARC, these systems should collect, analyze, and disseminate airline operational safety information to aviation professionals, related industries, and the U.S. Federal Aviation Administration (FAA). NCARC also advised that trust is essential to these systems and that keeping information confidential is necessary for the system's ability to acquire information. Safety information sharing systems are likely to fail should disclosure lead to punitive action, misrepresentation, revealed trade secrets, or increased exposure to liability.

Aviation safety information sharing systems collect information through voluntary reporting, electronic monitoring, or di-
rect observation. The NCARC, International Civil Aviation Organization ("ICAO"), and various national government agencies have initiated or endorsed policies and legislative actions protecting aviation safety information from public disclosure and use in punitive actions or litigation.

Information sharing systems protected from access by government agencies also provide a level of protection against national public disclosure policies. ICAO, NCARC, and other stakeholders in the international airline industry have endorsed non-punitive aviation safety information sharing systems as a key strategy for reducing the potential of airline accidents.

A recent initiative by ICAO exemplifies the emerging consensus regarding the connection between receiving useful safety data in exchange for confidentiality and protection against punitive actions. In 2003, ICAO’s Eleventh Air Navigation Conference issued Recommendation 2/4, which addressed the development of policy and national law supporting the protection of sources of safety information. The conference recommended that ICAO establish guidelines that would “provide support to States in adopting adequate measures of national law, for the purpose of protecting the sources and free flow of safety information, while taking into account the public interest in the proper administration of justice.” Most aviation safety information sharing systems in the world today collect voluntarily submitted data and information; therefore, these systems strive to protect the identity of their sources. Some national laws also protect individual sources of voluntary aviation information sharing systems from punitive actions. Exceptions to this protection include willful acts such as substance abuse, regulatory violations, and sabotage.

Irrespective of these policies and legal protections, ICAO notes an increase in punitive actions taken against identified sources to aviation safety information systems, especially those safety data collection systems that rely on direct observation.

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8 Id.
9 Nat’l Civil Aviation Review Comm’n, supra note 4.
10 Baumgarner, supra note 7.
12 Id.
According to the following statement by ICAO, this trend is detrimental to voluntary safety information sharing systems as well as aviation safety:

Recent years, however, have shown a trend in civil aviation when dealing with operational errors leading to occurrences, in that information from accident and incident records and safety data collection systems has been used for disciplinary and enforcement purposes, as well as admitted as evidence in judicial proceedings. These proceedings have also resulted in criminal charges being brought against individuals involved in such occurrences. Bringing criminal charges into aviation occurrences resulting from inadvertent operational errors may hinder the development and free exchange of safety information which is essential to improve aviation safety, with a potential adverse effect on it.\(^\text{13}\)

In an attempt to reverse the trend of member ICAO states implementing punitive actions against the data sources for these systems, during its meeting of September 28-October 8, 2004, the 35th ICAO Assembly passed Resolution A35-17, which states:

\begin{quote}
Whereas the primary objective of the Organization continues to be that of ensuring the safety of international civil aviation worldwide;

Recognizing the importance of the free communication of safety information amongst the stakeholders of the aviation system;

Recognizing that the protection of safety information from inappropriate use is essential to ensure the continued availability of all relevant safety information, to enable proper and timely preventive actions to be taken;

Concerned by a trend for safety information to be used for disciplinary and enforcement actions, and to be admitted as evidence in judicial proceedings;

Mindful that the use of safety information for other than safety-related purposes may inhibit the provision of such information, with an adverse effect on aviation safety;

Considering that a balance needs to be struck between the need for the protection of safety information and the need for the proper administration of justice;

Recognizing that technological advances have made possible new safety data collection, processing and exchange systems, resulting in multiple sources of safety information that are essential in order to improve aviation safety;
\end{quote}

\(^\text{13}\) Id.
Noting that existing international laws, as well as national laws and regulations in many States may not adequately address the manner in which safety information is protected from inappropriate use;

The Assembly:

1. Instructs the Council to develop appropriate legal guidance that will assist States to enact national laws and regulations to protect information from all relevant safety data collection and processing systems, while allowing for the proper administration of justice in the State;

2. Urges all Contracting States to examine their existing legislation and adjust as necessary, or enact laws and regulations to protect information from all relevant safety data collection and processing systems based, to the extent possible, on the legal guidance developed by ICAO; and

3. Instructs the Council to provide a progress report to the next ordinary Session of the Assembly on this matter.14

Against this backdrop of an expanding international consensus for protection of data against punitive uses and disclosure, what are the major U.S. aviation safety data programs, and to what extent do they approach the level of protections from sanctions and disclosure envisaged by ICAO? The balance of this paper attempts to answer these questions. The overall conclusions are:

There is not uniformity or consistency in confidentiality or protections against sanctions in these programs, although there has been an evolving trend toward more explicit protections of the safety data and those who report it;

Sources of protections vary from statutory, to regulatory, to case law, to administrative policy, to contract, to informal practice; and

Whether protection is granted in a particular case can be discretionary, as for example when a judge applies a statutory balancing test.

This paper describes five current aviation safety programs: flight data recorders ("FDRs"), cockpit voice recorders ("CVRs"), the Aviation Safety Reporting System ("ASRS"), the Aviation Safety Action Program ("ASAP"), and the Flight Opera-

tional Quality Assurance Program ("FOQA"). For each, we attempt to answer the following questions:

- What are the sources of safety data in the program?
- Is the data used for accident or incident investigation?
- Is the data used for Federal Aviation Administration (FAA) enforcement or civil penalty actions?
- Is the data used for company personnel action?
- Is the data available for civil litigation?
- Is the data available for public media?
- Is there any behaviors excluded from protections built into each program?

In this paper, possible FAA sanctions against individuals or entities are discussed. The FAA may either pursue "certificate actions," actions to suspend or revoke a certificate or rating issued by the FAA (individual or company), and/or "civil penalty actions," actions to levy monetary fines. Alternatively, the FAA may pursue "administrative actions," actions that are limited to a "Warning Notice" or a "Letter of Correction." In this paper, these sanctions are occasionally referred to collectively as "enforcement actions."

In addition, this paper discusses possible airline company sanctions against individuals who might compromise safety. We interchangeably use the terms "company personnel action" and "disciplinary" action in this regard. However, there are many gradations within these terms. Suspensions or terminations of flight crewmembers can probably be agreed to be "personnel actions" or "disciplinary actions." Less clear are examples such as being asked to speak with a chief pilot or being required to take additional training. For the most part, this paper does not attempt to delineate between all possible gradations of company action; rather, the major themes of FAA Advisory Circulars and union contracts are discussed.

At the outset, it should be noted that there are some subjects raised here that are not covered by statutes, regulations, administrative or judicial opinions, or publicly available orders, contracts or agreements (collectively referred to as "publicly available sources"). Therefore, some information about airline industry practices may be sketchy, although union contracts and informal contacts with airline industry personnel have provided

some data. In addition, there may be variation of industry practices among different organizations that are not known to the authors or their informants.\textsuperscript{18}

II. OVERVIEW OF U.S. SAFETY DATA PROGRAMS AND ISSUES OF SANCTIONS AND DISCLOSURE

Investigating aviation accidents and incidents has been the province of the federal government since the early days of aviation in the United States. For instance, beginning with the Air Commerce Act of 1926, it has been the statutory responsibility of the federal government to investigate aircraft accidents.\textsuperscript{19} In 1934, Congress amended the Air Commerce Act to require that the Secretary of Commerce make public the findings of aircraft accident investigations.\textsuperscript{20}

The purpose of obtaining safety data from any source is to use those data to look for safety problems and attempt to overcome those problems proactively to prevent future problems. Therefore, the availability of and access to data are universally recognized as desirable goals. Certain forms of safety data programs provide data without human discretion (hence, they are “mandatory” or “involuntary”). The flight data recorder is an example. However, there are persuasive arguments that voluntary safety programs can provide even better safety data. As has been noted:

Experience in a number of countries, including the United States, has shown that a voluntary system requires a trusted third party to manage the system. The reason is simply that people are reluctant to report their mistakes to the carrier that employs them or the government agency that licenses them. In voluntary systems, confidentiality is usually achieved by de-identification, or not recording any identifying information. Because of this confidentiality, voluntary systems tend to be more successful than mandatory systems in collecting human factor-related information.\textsuperscript{21}

However, both mandatory and voluntary systems often reveal action or inaction on someone’s part that constituted a possible violation of regulations or an employer’s rules or policies.

\textsuperscript{18} The authors would appreciate hearing from readers about any information that could be used to correct or augment these sections.


\textsuperscript{21} Id. at 77.
These situations can lead to a variety of consequences, from internal company disciplinary action, to FAA action, to court action, or public disclosure in a non-legal setting. So, disclosure of safety data—whether mandatory or voluntary—can have adverse personal and company consequences. Thus, there is an inevitable tension between the need for data and the concerns of those who have been involved in situations that generate those data. This tension has taken many forms, as shown by the history of these programs and the various types of protections that they contain.

The infrastructure of entities attempting to improve aviation safety by having accident and incident data available to those who can learn from them, versus protecting the reporter from sanctions or public disclosure, is complex. The following matrix is offered to help understand what competing interests are at stake:
<table>
<thead>
<tr>
<th>Program</th>
<th>Source of Data</th>
<th>Used for Accident/Incident Investigation?</th>
<th>Used for FAA Enforcement Action or Civil Penalty?</th>
<th>Used for Company Personnel Action (Retraining, Discipline, Suspension, etc.)?</th>
<th>Data Available for Civil Litigation?</th>
<th>Data Available for Public Media (TV, Radio, Internet, etc.)?</th>
<th>Behavior Excluded from Protection of Program?</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDR</td>
<td>Electronic data recorder</td>
<td>Yes</td>
<td>No publicly available sources of information cover this. Used as “corroborating” evidence, according to FAA Enforcement Handbook 2150.3</td>
<td>No publicly available sources of information cover this. There are agreements between airlines and employees not to use data</td>
<td>Some cases imply that data are discoverable. Factual data are available from NTSB for accidents</td>
<td>No publicly available sources of information cover this. There are agreements with airlines, FAA, and NTSB not to release. Factual data are available from NTSB for accidents</td>
<td>None</td>
</tr>
<tr>
<td>CVR</td>
<td>Electronic data recorder</td>
<td>Yes</td>
<td>No, according to FAR 91.609(g)</td>
<td>No, according to ALPA’s history and agreements between airlines and employees not to use data</td>
<td>Transcripts only (not tapes) pursuant to 49 U.S.C. § 1154, but tapes and transcripts can be discovered by court order</td>
<td>Transcripts only (not tapes) pursuant to 49 U.S.C. § 1114(c). But, this restriction applies to the NTSB only. Some have become public from other sources</td>
<td>None</td>
</tr>
<tr>
<td>ASRS</td>
<td>Self-reporting by flight crew or controllers</td>
<td>Incidents only (accidents are excluded)</td>
<td>Enforcement and civil penalty actions cases may be prosecuted, but no penalty may be imposed</td>
<td>No publicly available sources of information cover this. There are agreements between airlines and employees not to use data, and airlines may ignore the fact that an ASRS exists and still institute investigation and company action</td>
<td>No publicly available sources of information cover this, but program does not keep individually identified data</td>
<td>No publicly available sources of information cover this, but program does not keep individually identified data</td>
<td>Deliberate actions, criminal actions, accidents, lack of qualifications or competency, another violation within 5 years, untimely reports</td>
</tr>
<tr>
<td>Program</td>
<td>Source of Data</td>
<td>Used for Accident/incident Investigation?</td>
<td>Used for FAA Enforcement Action or Civil Penalty?</td>
<td>Used for Company Personnel Action (Retraining, Discipline, Suspension, etc.)?</td>
<td>Data Available for Civil Litigation?</td>
<td>Data Available for Public Media (TV, Radio, Internet, etc.)?</td>
<td>Behavior Excluded from Protection of Program?</td>
</tr>
<tr>
<td>---------</td>
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<td>---------------------------------------------------------------------------</td>
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<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>ASAP</td>
<td>Self-reporting by employees of FAR Part 121 airlines or FAR Part 145 repair stations having FAA approved programs</td>
<td>Program implies that accidents are excluded. Program designed for self-reporting of violations of one or more regulations and matters of general safety concern</td>
<td>If sole-source report of the problem, FAA will close case with &quot;no action.&quot; If non-sole-source report of the problem, FAA action is limited to &quot;administrative action&quot; only: Warning Notice or Letter of Correction</td>
<td>&quot;Corrective action&quot; may be required, but no company disciplinary action is permitted if the prohibition is contained in the Memorandum of Understanding that creates a program</td>
<td>Subject to FAR 193, but can be discovered by court order</td>
<td>Subject to FAR 193, but can be discovered by court order</td>
<td>Criminal acts, substance abuse, controlled substances, alcohol, intentional actions, falsification, untimely reporting</td>
</tr>
<tr>
<td>FOQA</td>
<td>Digital Flight Recorder or Quick Access Recorder data of aircraft operators with approved programs (not necessary to be an airline)</td>
<td>No</td>
<td>No, according to 14 CFR 13.401(e)</td>
<td>&quot;Corrective action&quot; is authorized by FOQA, but may be forbidden against individuals by agreement or contract</td>
<td>Subject to FAR 193, but can be discovered by court order</td>
<td>Subject to FAR 193, but can be discovered by court order</td>
<td>Criminal or deliberate acts</td>
</tr>
<tr>
<td>GAIN</td>
<td>Various operators, manufacturers, aviation organizations and government authorities</td>
<td>Unknown and possibly variable around the world</td>
<td>Unknown and possibly variable around the world</td>
<td>Unknown and possibly variable around the world</td>
<td>Unknown and possibly variable around the world; possibly protected by FAR 193 in the United States</td>
<td>Unknown and possibly variable around the world</td>
<td>Unknown and possibly variable around the world</td>
</tr>
</tbody>
</table>
This section contains a narrative description of the information contained in the matrix above:

The Flight Data Recorder. The Civil Aeronautics Board first required FDRs to be installed on air carrier airplanes weighing more than 12,500 pounds that operate above 25,000 feet by July 1, 1958. These crash-protected 5-parameter units recorded on metal foil the aircraft’s heading, altitude, airspeed, vertical acceleration, and time. The FDR rules were amended in 1972, 1987, 1988, and 1997. Currently, for transport category aircraft manufactured after August 18, 2002, 88 parameters must be recorded.

Even after this long history, not all aspects of the permissible uses of the FDR are well delineated. It is clear that FDRs can be used for accident investigation, and are a part of National Transportation Safety Board (NTSB) reports. However, the uses of incidents or other occurrences, plus uses in actions by the FAA, companies, litigants, and the media, are less clear.

The FDR may be used by airlines for accident and incident review. Concerning FAA uses, FAA Order 2150.3A, the FAA Compliance and Enforcement Program Handbook, states:

Under Section 13.7 of the Federal Aviation Regulations, the FAA is authorized to obtain and use flight recorder data in any investigation conducted by FAA since it involves a record required by the Federal Aviation Regulations to be maintained. The regulation further authorizes the use of flight recorder data in FAA enforcement actions since the regulations that require flight recorders in aircraft do not specifically limit or prohibit such use.

FAR 13.7 currently states:

Each record, document and report that the Federal Aviation Regulations require to be maintained, exhibited or submitted to the Administrator may be used in any investigation conducted by the Administrator; and, except to the extent the use may be spe-
cifically limited or prohibited by the section which imposes the requirement, the records, documents and reports may be used in any civil penalty action, certificate action, or other legal proceeding.\(^{28}\)

In at least one NTSB appeals case, FDR data was used in a pilot certificate revocation action in a situation that could be classified as an "incident."\(^{29}\) In that case, a deadheading airline captain riding as a passenger on a company flight reported to the company that the aircraft had been shaking violently and that passengers were screaming, crying, and praying during a portion of the flight, yet the cockpit flight crew made no report or logbook entry of anything unusual after the flight.\(^{30}\) When confronted about what happened by company personnel with the statements of the deadheading captain, the flight crew initially denied that anything had happened, but then changed their account to say they had a pressurization problem.\(^{31}\) However, flight data recorder data showed that the aircraft had neared a stall and had lost approximately 7,000 feet of altitude in 80 seconds, and that the engines had been over-temped.\(^{32}\)

The company fired both cockpit flight crew, and the NTSB affirmed the FAA's revocation of the captain's Airline Transport Certificate.\(^{33}\) In this case, FDR data was either the primary evidence for the NTSB's decision concerning the revocation of the captain’s ATP, or at the very least, corroborated the report of the deadheading captain that there were problems on the flight.\(^{34}\) Although the case does not address the subject, it is reasonable to conclude that FDR data was used by the company as justification for the firings in this non-accident situation.\(^{35}\)

There is also a 1977 court case interpreting language of Federal Aviation Regulation ("FAR") 121.343 as it existed at the time (the FAR requiring the installation and use of an FDR for any turbine-powered aircraft flying above flight level 250).\(^{36}\) The language of that regulation is nearly identical to the present


\(^{30}\) Id.

\(^{31}\) Id.

\(^{32}\) Id.

\(^{33}\) Id.

\(^{34}\) Id.

\(^{35}\) Id.

\(^{36}\) United States v. Frontier Airlines, Inc., 563 F.2d 1008, 1009 (10th Cir. 1977).
FAR 121.343(a)\textsuperscript{37} and FAR 121.343(i).\textsuperscript{38} In that case, the tenth Circuit Court of Appeals overturned a U.S. district court order for the airline to produce the FDR to the FAA even though no accident or incident had occurred.\textsuperscript{39} The court concluded that since FAR 121.343 did not contain a specific authorization requiring the release of FDR data for non-accident or non-incident situations, the FAA was not within its authority to subpoena FDR data for possible certificate or civil penalty action.\textsuperscript{40}

Unlike statutes and regulations about disclosure of CVR tapes and transcripts in company personnel actions, in litigation or in disclosure to the public (discussed shortly), no such statutes or regulations exist concerning uses of FDR data in these same contexts. While there may be informal agreements between airlines and their pilots not to use FDR data in disciplinary actions,\textsuperscript{41} some pilots' union contracts explicitly state that FDR data cannot be used as the basis for discipline.\textsuperscript{42} For example, the union contract between Alaska Airlines and its pilots states, “Information obtained from a flight data recorder or cockpit voice recorder or cockpit video recorder shall not be used as a basis, in whole or in part, for discipline or discharge action against a pilot.”\textsuperscript{43} Pilots' union contracts are not uniform on

\textsuperscript{37} The present wording is: “(a) Except as provided in paragraphs (b), (c), (d), (e), and (f) of this section, no person may operate a large airplane that is certificated for operations above 25,000 feet altitude or is turbine-engine powered unless it is equipped with one or more approved flight recorders that record data from which the following may be determined within the ranges, accuracies, and recording intervals specified in Appendix B of this part: . . .” 14 C.F.R. § 121.343(a).

\textsuperscript{38} At the time, the specific regulation was 14 C.F.R. § 121.343(d). The present wording of 14 C.F.R. § 121.343(i) is: “i) In the event of an accident or occurrence that requires immediate notification of the National Transportation Safety Board under Part 830 of its regulations and that results in termination of the flight, the certificate holder shall remove the recording media from the airplane and keep the recorded data required by paragraph (a), (b), (c), or (d) of this section, as appropriate, for at least 60 days or for a longer period upon the request of the Board or the Administrator.”

\textsuperscript{39} Frontier Airlines, Inc., 563 F.2d at 1009.

\textsuperscript{40} Id.

\textsuperscript{41} Interview with Dean Schwab, Senior Manager, HGS Flight Operations, Rockwell Collins (Mar. 19, 2004).

\textsuperscript{42} Agreement between Alaska Airlines, Inc. and the airline pilots in the service of Alaska Airlines, Inc. as represented by The Air Line Pilots Association International at 178 (Nov. 19, 1997) [hereinafter Alaska Airlines Agreement] (on file with the author).

\textsuperscript{43} Id.
this point. The contract between Southwest Airlines and its pilots is not as categorical, stating instead:

Data from Cockpit Voice Recorder (CVR) and Flight Data Recorder (FDR) tapes will be used only in the investigation of an accident/incident, and its contents are to be considered privileged information. Only CVR/FDR data relating directly to a specific accident or incident which requires the preservation of such data under FAA or NTSB regulations may be used in disciplinary proceedings.  

It also appears that there are some informal policies that companies will not use FDR data in personnel actions against flight crew if there has been no accident or incident.  

Concerning litigation, at least one case implies that FDR data are discoverable. Companies do not appear to release FDR data in litigation or to public media. FDR data are part of virtually every NTSB accident or incident report, and thus become public in those circumstances.

The Cockpit Voice Recorder: The CVR is an electronic system that preserves recent cockpit conversation, the captain’s and first officer’s radio communications, and public address announcements.

Following World War II, there was a series of aviation accidents involving cargo hold fires in Douglas DC-6 aircraft, but the cause of these fires was the subject of conjecture since no FDR or CVR information existed. These events and others prompted the FAA to require the installation of cockpit voice recorders on all turbine-powered transport category aircraft operated in air carrier service by July 1, 1966, for all turbine-powered, and by January 1, 1967, for all pressurized aircraft with four reciprocating engines.

It is clear that CVR data are used in FAA and NTSB investigations of incidents and accidents. Additionally, it is clear that from the very beginning of the CVR program, regulatory protec-

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45 Schwab, supra note 41.
47 For a history of the uses and abuses of CVRs, see Van Stewart, "Privileged Communications"? The Bright Line Rule in the Use of Cockpit Voice Recorder Tapes, 11 COMM LAW CONCEPTS 389 (2003).
48 Grossi, supra note 22.
tions against enforcement actions were built into the program. On July 3, 1964, even before any CVR was required to be installed, FAR 41.212(e) was published. It stated, “The Administrator does not use the record in any civil penalty or certificate action.” The present wording, in effect as FAR 91.609(g), states, “The Administrator does not use the cockpit voice recorder record in any civil penalty or certificate action.”

Whether CVR data could be used in company actions was a debate from the beginning. As early as 1969, “the Executive Board of the Air Line Pilots Association (ALPA), which represented the majority of airline pilots in the United States at the time, endorsed the use of CVRs, with the proviso that their use be limited to accident investigations.” At the same time, ALPA continued to reaffirm “its long-standing position in opposition to the use of aircraft crash recorders and cockpit voice recorders for purposes other than accident investigation.”

In addition, some union contracts specifically forbid the use of the CVRs for discipline. As noted above, Alaska Air’s contract states unequivocally that CVR data shall not be used; Southwest’s contract is not quite so absolute.

Whether CVR data could be used in civil litigation or by public media also was an issue shortly after the rules were enacted requiring the installation of CVRs. The Freedom of Information Act (“FOIA”) was enacted in 1966, the same year the first rule regarding installation of CVRs became effective. The thrust of the FOIA is that the federal government shall release information to the public upon request, unless the information fits within one or more of nine “exemptions” to the requirement to release the information. The most commonly cited exemption used to resist disclosure of CVR data is the third exemption,
which states that disclosure shall not occur if disclosure is "specifically exempted from disclosure by statute."°59

In the early years of CVRs, transcripts of CVR tapes began to be appear indiscriminately in news accounts of accidents, often with no bearing on causes of the accident, with the result that there were unwarranted and unfair accusations made against those involved in the accident.60 As a result, in 1982, Congress began to enact legislation restricting the public dissemination of the recording and transcript.61

In its present form, that statute, 49 U.S.C. § 1114(c) states:

(1) The Board may not disclose publicly any part of a cockpit voice or video recorder recording or transcript of oral communications by and between flight crew members and ground stations related to an accident or incident investigated by the Board. However, the Board shall make public any part of a transcript or any written depiction of visual information the Board decides is relevant to the accident or incident—

(A) if the Board holds a public hearing on the accident or incident, at the time of the hearing; or

(B) if the Board does not hold a public hearing, at the time a majority of the other factual reports on the accident or incident are placed in the public docket.

(2) This subsection does not prevent the Board from referring at any time to cockpit voice or video recorder information in making safety recommendations.62

In a case involving an earlier version of 49 U.S.C. § 1114(c) (a version containing the prohibition against releasing the CVR tape itself, as the present statute does), a U.S. federal district judge concluded that the tape should not be released because the third exemption to the FOIA applied63 (disclosure shall not occur if disclosure is "specifically exempted from disclosure by statute").64 That case arose from the crash of a Boeing 737, United Airlines Flight 585, in Colorado Springs, Colorado, on March 3, 1991.65 In that suit, a relative of a victim of crash

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59 Id. § 552(b)(3).
64 Id. at 101 (quoting 5 U.S.C. § 552(b)(3) (2000)).
65 Id.
sought to obtain a copy of the recording itself, not just a transcript, asserting that the recording itself was necessary for accident reconstruction.\textsuperscript{66}

In 1994, Congress passed a statute that gave guidance to courts that had to deal with a discovery request in litigation for a CVR recording, and for parts of the CVR transcript that were not released by the NTSB. That year, Congress added the following provisions to the statute dealing with the NTSB’s duties and responsibilities. 49 U.S.C. § 1154 states:

a) Transcripts and recordings.

(1) Except as provided by this subsection, a party in a judicial proceeding may not use discovery to obtain—

(A) any part of a cockpit or surface vehicle recorder transcript that the National Transportation Safety Board has not made available to the public under section 1114(c) or 1114(d) of this title; and

(B) a cockpit or surface vehicle recorder recording.

(2) (A) Except as provided in paragraph (4)(A) of this subsection, a court may allow discovery by a party of a cockpit or surface vehicle recorder transcript if, after an in camera review of the transcript, the court decides that—

(i) the part of the transcript made available to the public under section 1114(c) or 1114(d) of this title does not provide the party with sufficient information for the party to receive a fair trial; and

(ii) discovery of additional parts of the transcript is necessary to provide the party with sufficient information for the party to receive a fair trial.

(B) A court may allow discovery, or require production for an in camera review, of a cockpit or surface vehicle recorder transcript that the Board has not made available under section 1114(c) or 1114(d) of this title only if the cockpit or surface vehicle recorder recording is not available.

(3) Except as provided in paragraph (4)(A) of this subsection, a court may allow discovery by a party of a cockpit or surface vehicle recorder recording if, after an in camera review of the recording, the court decides that—

(A) the parts of the transcript made available to the public under section 1114(c) or 1114(d) of this title and to the party through discovery under paragraph (2) of this subsection do not provide

\textsuperscript{66} Id.
the party with sufficient information for the party to receive a fair trial; and

(B) discovery of the cockpit or surface vehicle recorder recording is necessary to provide the party with sufficient information for the party to receive a fair trial.

(4) (A) When a court allows discovery in a judicial proceeding of a part of a cockpit or surface vehicle recorder transcript not made available to the public under section 1114(c) or 1114(d) of this title or a cockpit or surface vehicle recorder recording, the court shall issue a protective order—

(i) to limit the use of the part of the transcript or the recording to the judicial proceeding; and

(ii) to prohibit dissemination of the part of the transcript or the recording to any person that does not need access to the part of the transcript or the recording for the proceeding.

(B) A court may allow a part of a cockpit or surface vehicle recorder transcript not made available to the public under section 1114(c) or 1114(d) of this title or a cockpit or surface vehicle recorder recording to be admitted into evidence in a judicial proceeding, only if the court places the part of the transcript or the recording under seal to prevent the use of the part of the transcript or the recording for purposes other than for the proceeding.

(5) This subsection does not prevent the Board from referring at any time to cockpit or surface vehicle recorder information in making safety recommendations.67

In applying this statute, courts have reached opposite conclusions about the discoverability of CVR recordings. In litigation following the crash on takeoff of a Singapore Airlines Boeing 747 at Chiang Kai-Shek International Airport in Taipei, Taiwan on October 31, 2000, a U.S. federal magistrate judge denied the plaintiffs' request for a copy of the CVR tape, concluding that "plaintiffs have made no attempt to demonstrate that the publicly [sic] released transcript of the CVR, Amended Joint Stip., Exh. 3, is insufficient for them to receive a fair trial."68

In contrast, the same U.S. federal magistrate judge reached the opposite conclusion in a case involving litigation from the landing overrun accident of a Southwest Airlines Boeing 737 at

68 In re Air Crash at Taipei, Taiwan on October 31, 2000, 211 F.R.D. 374 (C.D. Cal. 2002).
Burbank, California on March 5, 2000. Subject to a “protective order” limiting the use of the tape to the litigation only, the magistrate judge noted that the plaintiffs had argued persuasively that the transcript of the CVR would not be adequate, given that the transcript had been produced by a group of persons “. . . listening to the tape at the behest of the NTSB”, and that group transcript could be faulty. The magistrate judge further agreed with the plaintiff’s argument that 51 words were missing and 11 “expletives” were deleted from the NTSB transcript. She also pointed out that “. . . the [transcript] fails to reflect changes in voice tone, tempo, volume and inflection, all of which are important.” Finally, she stated “. . . the [transcript] does not accurately reflect the noises heard in the cockpit during the recording, and such noises can help an expert recreate exactly what happened in the cockpit.”

Note that these statutes and cases specifically deal with the NTSB’s responsibilities for the CVR recording. These two statutes do not restrict other government agencies, as well as airlines (who are the owners of the CVR tapes), from allowing others to hear the tapes. For instance, amid some controversy, the FBI, which was in charge of the investigation of the crash of United Airlines Flight 93, which crashed on September 11, 2001 in Pennsylvania, played the CVR tape twice on April 18, 2002 in closed sessions, once for the relatives of the flight crew and once for the relatives of the passengers. In a strong objection to the FBI’s playing the tape, but without citing any legal authority, ALPA’s President sent letters to Attorney General John Ashcroft and FBI Director Robert Mueller stating that playing the tape was “contrary to congressional intent, contrary to precedent, and contrary to the underlying legal principles justifying the existence of the CVR.”

There have been numerous occasions in which CVRs have become public from sources other than the NTSB or a court, whether by “legitimate” means or not. There are several In-

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70 Id. at 620.
71 Id.
72 Id.
73 Id.
75 Id.
ternet sites that have portions of several CVR recordings on them, and apparently none of these recordings have come from the NTSB.\textsuperscript{76} In addition, at least one television program features extended portions of the CVR recording of United flight 232, the DC-10 whose engine fan disk exploded, rendering the aircraft's controls inoperative. The last few seconds of that recording are also available on the Internet.\textsuperscript{77}

*The Aviation Safety Reporting System:* ASRS was implemented in April 1976.\textsuperscript{78} According to an Advisory Circular originally issued by the FAA at that time:

The FAA determined that the ASRP effectiveness would be greatly enhanced if the receipt, processing, and analysis of raw data were accomplished by NASA rather than by the FAA. This would ensure the anonymity of the reporter and of all parties involved in a reported occurrence or incident and, consequently, increase the flow of information necessary for the effective evaluation of the safety and efficiency of the system.\textsuperscript{79}

The program receives, processes, and analyzes reports from pilots, air traffic controllers, and others concerning aviation incidents in U.S. airspace. Since its inception, the FAA has taken the position that filing an ASRS report demonstrates a "constructive attitude" about safety matters, and although a violation of regulation might be investigated and established, there will be no enforcement of a punishment (suspension or revocation of a medical or certificate, or monetary fine) as long as a report is mailed to NASA within 10 days of the event.\textsuperscript{80} The immunity from punishment is not available if the violation was deliberate, if there was a criminal offense committed, if there was an accident, if the incident disclosed a lack of qualification or compe-


\textsuperscript{78} See http://asrs.arc.nasa.gov (last visited Aug. 30, 2005).


\textsuperscript{80} Aviation Safety Reporting System Program Overview 8 (2003), at http://asrs.arc.nasa.gov/briefing/PDF_Files/program_briefing.pdf (last visited Aug. 30, 2005).
tency, or if the person has been found to have committed another violation within five years preceding the event.81

This immunity was first codified as FAR 91.57 in 1979.82 It is nearly identical to the present FAR 91.25, which states, “The Administrator of the FAA will not use reports submitted to the National Aeronautics and Space Administration under the Aviation Safety Reporting System (or information derived therefrom) in any enforcement action except information concerning accidents or criminal offenses which are wholly excluded from the program.”83 Thus, the role of ASRS is clear in FAA disciplinary actions.

Nothing in the ASRS program speaks directly to the subject of company disciplinary actions against flight crewmembers. However, industry practice appears to be that airlines have a “no jeopardy” review process, aimed at understanding how to alleviate system problems that are uncovered. Moreover, if the company feels disciplinary action is necessary, there are other sources of data that can serve as the basis for personnel action.84 Another view is that an airline may simply ignore whether an ASRS form has been filed as it reviews a safety-related event and will require corrective action, such as retraining, without regard to whether a form has been filed.85

There is no role for ASRS data in civil litigation or in public disclosure, other than the program’s own reports such as “Callback” and “Directline.”86 This is because information retained by NASA is de-identified; the top of the form containing the identifying information of the sender is returned to the sender with no copy attached to the form itself. Thus, NASA cannot provide any individual data for litigation or media use.

ASRS is clearly a widely recognized and widely used program. Between the program’s beginning on April 1, 1976 and December 31, 2003, there were 605,133 ASRS reports filed.87 The program’s website states that there has never been a case of breach

81 Id.
82 See 14 C.F.R. § 91.57 (2000).
83 14 C.F.R. § 91.25.
84 Dean Schwab, supra note 40.
85 Raymond H. Wright, supra note 26.
87 Aviation Safety Reporting System Program Overview, supra note 78.
of confidentiality in the more than twenty years that NASA has administered the program.\textsuperscript{88}

The Aviation Safety Action Program: ASAP is an information program described as a partnership between the FAA, an airline, and possible third parties such as labor unions.\textsuperscript{89} During the early 1990's, several demonstration programs between airlines and the FAA were conducted, with American Airlines instituting its program in 1994.\textsuperscript{90} The FAA issued an Advisory Circular on the subject in January 1997, and as of February 2005, there are forty-four ASAP programs in place.\textsuperscript{91}

Part 121 airlines and Part 145 repair stations are not required to implement ASAP programs. If a program is created and accepted by the FAA, as indicated by the appropriate FAA signature, it provides a mechanism for employees to submit safety-related reports to an Event Review Committee, consisting of representatives from each party to the ASAP agreement. If a timely filed voluntary report is the only source of data about the safety concern, the FAA will close the case with “no action.” If the report is not the only source of information about the event, the FAA will take no more than “administrative” action against someone violating an FAR: a Letter of Correction or a Warning Notice. Regardless of whether the report is the only source of data, neither the ASAP report nor its contents can be used to initiate or support company disciplinary action.

In order for the employee to benefit from these provisions of an ASAP program, the regulatory violation must appear to have been inadvertent, not appear to involve an intentional disregard for safety, criminal activity, substance abuse, controlled substances, alcohol, or intentional falsification of records.\textsuperscript{92} However, an ASAP program requires that the company take “corrective action” if the ASAP report discloses a “lack of qualification” of the individual who files it. In this or other circumstances in which the Event Review Committee believes

\textsuperscript{88} Id.


\textsuperscript{91} Federal Aviation Administration, supra note 89.

"corrective action" is necessary, the employee must complete the corrective action to the satisfaction of all members of the Committee. If the person fails to complete the corrective action, he or she can no longer receive the company disciplinary and FAA enforcement and civil penalty protections of the program.

The FAA has issued FAA Order 8000.82, dated September 3, 2003, which states that an approved ASAP program falls under the public disclosure protections afforded by FAR 193, and that the involved individuals agree to it or it is ordered to do so by a court.93 ASAP information provided to the FAA will not be released unless the submitting individual agrees to its release, or unless release is ordered by a court of competent jurisdiction. The genesis of FAR Part 193 was the Federal Aviation Reauthorization Act of 1996.94 This Act created a new section of the United States Code, 49 U.S.C. § 40123, which states:

(a) In General.—Notwithstanding any other provision of the law, neither the Administrator of the Federal Aviation Administration, nor any agency receiving information from the Administrator, shall disclose voluntarily-provided safety or security related information if the Administrator finds that—

(1) the disclosure of the information would inhibit the voluntary provision of that type of information and that the receipt of that type of information aids in fulfilling the Administrator’s safety and security responsibilities; and

(2) withholding such information from disclosure would be consistent with the Administrator’s safety and security responsibilities.

(b) Regulations.—The Administrator shall issue regulations to carry out this section.95

On July 26, 1999, the FAA published its proposed version of FAR Part 193 to implement this statute.96 After public comment, the rule became effective on June 25, 2001.97 FAR Part 193, entitled “Protection of Voluntarily Submitted Information,” says that the FAA will not release information that is safety or security related and is provided voluntarily.98 In addition, if the FAA

93 Id. at 54767.
98 14 C.F.R. § 193.7(b) (2005).
receives a subpoena for information, it will not release information unless both the person affected and the FAA agree that it should be released voluntarily, or unless the FAA is ordered to do so by a court of competent jurisdiction. The language of FAR Part 193.7(f) is:

What if the FAA receives a subpoena for the information I submit? When the FAA receives a subpoena for information you have submitted under this part, the FAA contacts you to determine whether you object to disclosure of the information or you wish to participate in responding to the subpoena. If both you and the FAA determine that release of the information is appropriate, the information is released. Otherwise, the FAA will not release information designated as protected under this part unless ordered to do so by a court of competent jurisdiction.

There has only been one reported court decision in the United States in which a court was called on to decide whether to order an airline to release ASAP data in litigation. This case was before the advent of FAR 193. In the case of In re Air Crash Near Cali, Colombia on December 20, 1995, a U.S. district court judge recognized American Airlines' claim that its ASAP data was subject to a "qualified privilege" against disclosure to plaintiffs in the litigation. The judge stated that the plaintiffs would have to establish a "particularized showing of need and hardship" in order to obtain the data, a burden that he admitted would be hard for plaintiffs to meet. The judge agreed, however, that if the plaintiffs could come forward with a "persuasive showing of need and hardship," the judge would review the documents privately in camera, and then decide whether they should be released. Thus, no disclosure of the ASAP data was ordered without that review. The importance of this case, even though it was decided before FAR 193 was promulgated, is that it may provide some standards by which judges may decide whether to order the release of ASAP data to litigants, which is permitted by FAR 193.7(f).

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99 14 C.F.R. § 193.7(f).
100 Id.
102 Id. at 1530.
103 Id. at 1537.
104 Id.
105 Id.
Flight Operational Quality Assurance Program: The FAA instituted a demonstration program for the FOQA program in 1995. FOQA is a voluntary program in which aircraft operators (not limited to FAR Part 121 or 135 airlines) develop programs to use Digital Flight Data Recorder or "Quick Access Recorder" electronic information to observe aircraft operations that exceed pre-set parameters but for which no accident or incident occurs.

The FOQA program records data on routine flights. Data may either be stored and downloaded later, or the system may transmit information about events that are outside preset parameters to a company receiving station on the ground for immediate investigation. In the press release announcing the promulgation of the FOQA regulation, codified as 14 C.F.R. § 13.401 and implemented effective October 25, 2001, the FAA said that demonstration projects had already been used to improve the safety of approaches at more than a dozen airports worldwide. In addition, the program had been used to document unusual autopilot disconnects, ground proximity warning system warnings, excessive take-off angles, unstable landing approaches, hard landings, and non-compliance with standard operating procedures. FOQA data has also been used for monitoring fuel efficiency, enhancing engine condition monitoring, noise abatement compliance, rough runway surfaces, and aircraft structural fatigue. FOQA data allows airlines to observe entire distributions of parameters (thereby enabling tracking of shifts in the statistical properties of the distribution over time). This information is available not only to flight operations, but also to maintenance and engineering as well.

14 C.F.R. § 13.401 states that no operator must create a FOQA program. However, if one does, the program must be submit-

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108 Wright, supra note 26.
110 Interview with Thomas Longridge, Ph.D., Manager, FAA Advanced Qualification Program Branch (May 26, 2004).
ted for approval to the FAA in order for protection from enforcement actions to apply. The rule also requires the operator of an approved program to submit "aggregate" flight data recorder data to the FAA as part of the *quid pro quo* for it and its employees receiving protection from enforcement actions. It is up to the operator to decide what safety data to collect and analyze; the FAA does not prescribe what flight parameters must be studied.

In addition, the rule requires that the operator—not the FAA—be responsible for determining what corrective action should be undertaken if data show that there is a safety problem. The operator is required to inform the FAA of each corrective action that it undertakes based on FOQA data. The language of the discussion in the final rule implies that "corrective action" may apply to both operators and individuals. However, when FAR 193 was promulgated as a Final Rule on October 31, 2001, there was nothing in the rule or the commentary about it concerning whether a company may discipline a pilot based on FOQA data. This is in contrast to the ASAP program, in which the Advisory Circular states that no disciplinary action can be based on an ASAP report or its data; there is no such prohibition built into the FOQA programs. However, disciplinary actions against employees may be disallowed by union contract. For example, the current contract with Delta pilots does not allow use of any FOQA data in disciplinary action. Industry practice may also permit FOQA data to serve as the basis for company action, retraining at a minimum, if there is no union contract to prevent it. In either event, if the FAA

112 For a thorough discussion of how the FAA extended more protections under the Final Rule than it had proposed in the original Notice of Proposed Rulemaking, see Evan P. Singer, Comment, *Recent Developments in Aviation Safety: Proposals to Reduce the Fatal Accident Rate and the Debate Over Data Protection*, 67 J. Air L. & Com. 499 (2002). The original Notice of Proposed Rulemaking proposed a distinction between "punitive enforcement" and "remedial enforcement," a concept that the FAA dropped when 14 CFR § 13.401 was enacted. See Flight Operational Quality Assurance Program, 65 Fed. Reg. 41528 (proposed July 5, 2000).


114 Delta Airlines Working Agreement between Delta Air Lines, Inc. and The Air Line Pilots in the Service of Delta Air Lines, Inc., as Represented by the Air Line Pilots Association, *International*, at p. 249, (June 21, 2001) (on file with the author). In addition, a separate letter of agreement, at p. 340, also dated June 21, 2001, reiterates that "FOQA program information shall not be used as a basis, in whole or in part, for discipline or discharge action against pilots, individually or collectively."

determines that the operator is failing to take corrective actions of safety problems after being notified of those problems by the FAA, or if there is willful misconduct, willful violation of the regulations, or other circumstances, the FAA may withdraw approval of the program, thus terminating enforcement protection.

Concerning enforcement actions, 14 C.F.R. § 13.401(e) states: "Except for criminal or deliberate acts, the Administrator will not use an operator's FOQA data or aggregate FOQA data in an enforcement action against that operator or its employees when such FOQA data or aggregate FOQA data are obtained from a FOQA program that is approved by the Administrator." However, the FAA states that it will retain the option of conducting surveillance activities of those areas where FOQA data indicate safety problems, and that violations discovered during surveillance activities will not be immune from sanction.117

Finally, 14 C.F.R. § 13.401(f) states that, "Disclosure of FOQA data and aggregate FOQA data, if submitted in accordance with an order designating the information as protected under part 193 of this chapter, will be afforded the nondisclosure protections of part 193 of this chapter." FAA Order 8000.81, which became effective April 14, 2003, also extends the protections of FAR Part 193 to FOQA data.118 As with ASAP, information will not be released by the FAA unless by consent of the party who provided it or by a court order.

Discussion

The earliest safety data programs, the FDR and CVR, were electronic reporting systems that generate data "automatically." The FDR program, originally instituted in 1958, had no publicly available restrictions for protections against sanctions by the FAA or an airline, although there are agreements and union contracts forbidding the use of FDR data for FAA enforcement actions. This FDR program still has the least formalized protections. With the advent of the CVR program in 1966, the precursor to the current FAR 91.25 was already in place, having been promulgated in 1964. It stated that the FAA would not use CVR data for enforcement actions. In 1982, Congress began restricting the disclosure of the CVR tape and transcripts. Congress

117 Flight Operational Quality Assurance Program Final Rule, supra note 106.
118 14 C.F.R. § 13.401(f).
added further clarification of the availability of discovery in civil litigation in 1994. Thus, the CVR data have more definitive protections in place than do FDR data.

The ASRS was the first non-automatic reporting system; and built into its original design in 1975 was a promise of limited protection from enforcement sanctions. That promise was further codified in an FAR in 1979. As with the CVR, from its inception, the ASRS had some protections built in for the person who might have had a safety problem. However, the program did not (and to this day does not) explicitly deal with issues of use by airlines, litigants, or the public media, although it appears that airlines will either take a non-punitive stance if an ASRS report is filed, or the airline may ignore the fact that it has been filed at all.

The FAA worked with several U.S. airlines in the early 1990s on developing ASAP programs, and the FAA issued an Advisory Circular about the program in 1997. From its inception, the ASAP program contained some FAA enforcement protections and company discipline protections, although some protection against litigation disclosure and public disclosure was not added until 2003, when FAA Order 8000.82 was promulgated, placing the program under the protections of FAR 193, which had been added in 2001.

The FOQA program, when it was first instituted through a demonstration program in 1995, did not contain protections against sanctions. Now, however, the FAA cannot take enforcement action based on FOQA safety data, and an airline is limited to “corrective action” under the program. Union contracts can exclude FOQA from the realm of disciplinary action, although airline practice may be for airlines to require retraining if there is no contract in place forbidding it. The data is protected against disclosure for litigation and public media purposes by FAA Order 8000.81, issued in 2003, which placed FOQA under the protections of FAR 193.

The figure on the next page shows when each program began, and when each statute, regulation, or order became effective for that program.
IV. CONCLUSIONS

At the outset, we noted that there is an emerging consensus in favor of more protections for those who report aviation safety data. After having reviewed the U.S. experience, it can be seen, first, that there is not uniformity or consistency among these programs concerning the types of protections that they offer, although the more recent programs contain more explicit protections from sanctions and disclosure of data, chiefly by statute, FAR, and FAA Order. Earlier programs using the FDR, CVR, or the ASRS program have relied in some measure on informal agreements and union contracts concerning use of the data.

Second, sources of protections vary, from statutory, to regulatory, to case law, to administrative policy, to contractual, to informal practice. This is evident from the matrix presented above. In addition, although there might be some circumstances in which all data except ASRS data might be disclosed, it is the authors' belief that explicit protections by statute, FAR, and FAA Order provide more protections to those reporting safety data than do informal agreements or union contracts. Because the recent programs of ASAP and FOQA enjoy these more explicit protections, it is reasonable to believe that programs that may be implemented in the future, such as the use of video camera recording in the cockpit, will also contain explicit protections.
And third, although there are formal protections in the form of statutes and regulations, there is still the possibility of disclosure of data from either the NTSB or the FAA in civil litigation. This is because the statute governing the NTSB data, 49 U.S.C. § 1154, contains a balancing test where a court may order release of a CVR transcript or recording, subject to a protective order, if necessary for a party to receive a fair trial in a civil action.\textsuperscript{20} FAR 193 permits the FAA to release ASAP and FOQA pursuant to court order. One specific danger this creates is the possibility that data, once produced via the discovery process, will become public due to actions of the party who receives the data. If there is no confidentiality order or protective order, that data may fall under the general rule of litigation that information produced through discovery becomes the property of the party who receives it, in the absence of an agreement of the parties or an order of the court.

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