

**Appendix A to § 219.3—Reimbursement Schedule**

## Reproduction:

Photocopy, per page .....	\$0.25
Paper Copies of Microfiche, per frame .....	0.25
Duplicate Microfiche, per microfiche .....	0.50
Electronic Productions, per request .....	5.00

## Search and Processing:

Clerical/Technical, hourly rate	22.00
Computer Support Specialist, hourly rate .....	30.00
Manager/Supervisory, hourly rate .....	30.00

3. Section 219.5 is amended by revising paragraph (a) to read as follows:

**§ 219.5 Conditions for payment.**

(a) *Direct costs.* Payment shall be made only for costs that are both directly incurred and reasonably necessary to provide requested material. Search and processing, reproduction, and transportation costs shall be considered separately when determining whether the costs are reasonably necessary. Photocopying or microfiche charges are reasonably necessary only if the institution has reproduced financial records that were not stored electronically (i.e., where the information requested was stored only on paper or in microfiche), or where the government authority making the request has specifically asked for printed copies of electronically stored records.

\* \* \* \* \*

By order of the Board of Governors of the Federal Reserve System, August 12, 2008.

**Robert deV. Frierson,**

*Deputy Secretary of the Board.*

[FR Doc. E8-18898 Filed 8-14-08; 8:45 am]

**BILLING CODE 6210-01-P**

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Parts 121, 125, and 135**

[Docket No. FAA-2006-26135; Notice No. 08-08]

RIN 2120-A179

**Filtered Flight Data**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Supplemental notice of proposed rulemaking (SNPRM).

**SUMMARY:** The FAA is amending its proposal to prohibit the filtering of some original flight recorder sensor signals. Comments to the NPRM published in

November 2006 and changes in available technology have caused us to reexamine our position on data filtering. We are now proposing that certain critical data parameters may be filtered if a certificate holder can show that the data can be accurately reconstructed. This proposed rule would improve the integrity and quality of the data recorded on digital flight data recorders while giving aircraft designers and operators more flexibility in system design and operation where allowable, including an option to filter data.

**DATES:** Send your comments on or before November 13, 2008.

**ADDRESSES:** You may send comments identified by Docket Number FAA-2006-26135 using any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov> and follow the online instructions for sending your comments electronically.

- *Mail:* Send comments to Docket Operations, M-30; U.S. Department of Transportation, 1200 New Jersey Avenue, SE., Room W12-140, West Building Ground Floor, Washington, DC 20590-0001.

- *Hand Delivery or Courier:* Bring comments to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- *Fax:* Fax comments to Docket Operations at 202-493-2251. For more information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

*Privacy:* We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. Using the search function of our docket Web site, anyone can find and read the electronic form of all comments received into any of our dockets. This includes the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477-78).

*Docket:* To read background documents or comments received, go to <http://www.regulations.gov> and follow the online instructions for accessing the docket. Or, go to the Docket Management Facility in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

**FOR FURTHER INFORMATION CONTACT:** For technical questions concerning this proposed rule contact Brian A. Verna, Avionics Systems Branch, Aircraft Certification Service, AIR-130, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 385-4643; fax (202) 385-4651; e-mail [brian.verna@faa.gov](mailto:brian.verna@faa.gov). For legal questions concerning this proposed rule contact Karen L. Petronis, Senior Attorney for Regulations, Regulations Division, Office of the Chief Counsel, AGC-200, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267-3073; fax 202-267-7971; e-mail [karen.petronis@faa.gov](mailto:karen.petronis@faa.gov).

**SUPPLEMENTARY INFORMATION:** Later in this preamble under the Additional Information section, we discuss how you can comment on this proposal and how we will handle your comments. This discussion includes related information about the docket, privacy, and the handling of proprietary or confidential business information. We also discuss how you can get a copy of this proposal and related rulemaking documents.

**Authority for This Rulemaking**

The FAA's authority to issue aviation safety rules is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart III, Section 44701. Under that section, the FAA is charged with prescribing regulations providing minimum standards for other practices, methods and procedures necessary for safety in air commerce. This regulation is within the scope of that authority since flight data recorders are the only means available to account for aircraft movement and flight crew actions critical to finding the probable cause of incidents or accidents, including data that could prevent future incidents or accidents.

**I. Background****A. Statement of the Problem**

During several aircraft accident investigations, the National Transportation Safety Board (NTSB or Board) found that some flight data recorder systems were filtering flight recorder parameter signals before they were recorded. As a result, the recorded data did not accurately reflect the aircraft's performance or the movements

of the flight control systems before and during the accident or incident under investigation. Such signal filtering both hampered and delayed the investigations. Throughout the investigation of American Airlines Flight 587 (Flight 587), the NTSB expended significant resources and time trying to recreate the performance and movements of the flight controls of the accident aircraft.

In November 2003, the NTSB issued three recommendations (NTSB Recommendations A-03-48/A-03-49/A-03-50, November 6, 2003) on digital flight data recorder (DFDR) recording requirements. The NTSB recommended that the FAA require all aircraft have a DFDR system installed "capable of recording values that meet the accuracy requirements through the full dynamic range of each parameter at a frequency sufficient to determine a complete, accurate, and unambiguous time history of parameter activity, with emphasis on capturing each parameter's dynamic motion at the maximum rate possible, including reversals of direction at the maximum rate possible."

#### *B. Action by the FAA*

The FAA agreed with these recommendations. In 2006, we issued a notice that proposed a prohibition on filtering certain original flight data sensor signals. The 2006 NPRM contains a more complete discussion of the proposal and the events leading up to it (November 15, 2006, 71 FR 66634).

The comments we received on the proposed rule alerted us to several features of the proposed prohibition that could have significantly more impact than we would have predicted. The first was the proposed definition of filtering, which described it as a change to any original parameter signal for any reason other than the three specified in the rule. The comments indicated that the level of signal processing that is in use on newer flight data systems no longer coincides with more traditional concepts of filtering, and leaves in question whether current system designs would be considered filtering. A more detailed consideration of this issue is included in the discussion that follows.

As we considered whether to change the proposed definition of filtering, we studied what is quickly becoming the standard in electronic signal processing. Our intent in the 2006 NPRM was to prohibit the processing of certain flight data sensor signals that would result in inaccurate data being preserved, as happened with the rudder movement data on Flight 587. That airplane

crashed after takeoff from LaGuardia Airport in November 2001.

The investigation following the crash of Flight 587 indicated that the issue was not that data were filtered, but that the actual rudder movement data could not be reconstructed once processed by installed filtering devices. While a prohibition like our 2006 proposal would solve the problem, current capabilities suggest that when properly processed and documented, data can be recovered from a system design that incorporates filtering. We are now proposing that data filtering be allowed if a certificate holder can demonstrate that the 'filtered' recorded data meet the recording requirements of the regulations, and that the original sensor signal data can be accurately reconstructed using a documented, repeatable process.

#### *C. Changes in This Supplemental Notice of Proposed Rulemaking*

We have moved the filtering regulation from proposed § 121.344(n) to its own section, § 121.346 (or complementary sections in other parts), to avoid any confusion with the other flight recorder requirements. While today's document uses part 121 as a reference, we are proposing the same changes for parts 125, and 135.

Section 121.346 begins with a definition of filtering that differs slightly from the one we proposed in 2006. The new proposed definition indicates that when a signal is formatted in any way to be DFDR compatible, it is not considered filtered. As discussed below, we disagreed with commenters that thought the definition was too specific to allow certain current practices in signal conditioning.

We have changed our position from a strict filtering prohibition to one of conditional allowance that distinguishes between two groups of flight recorder parameters. The first contains those that are prohibited from being filtered unless a certificate holder can demonstrate that it has done the tests, analyses, and maintains the procedures necessary to reconstruct the original sensor signal values from the filtered recorded data. The FAA understands that such technology is available, and where it can be shown to be reliable, it will be allowed. The second includes those parameters whose signals may be filtered without further action.

We have split the 88 parameters listed in § 121.344(a) into two groups.

The first group includes those parameters that may be filtered only if a certificate holder can demonstrate that the original sensor signal data (values) can be reconstructed using a valid,

repeatable procedure. This group includes parameters such as flight control positions, flight control input forces and flight control surface positions that are sampled at higher rates. Filtering can and has been shown to result in incorrect information being recorded. This group also includes those parameters that are considered critical to accident investigation, including altitude, airspeed, heading, vertical and lateral acceleration, pitch attitude, roll attitude and engine thrust. Parameters that may not be filtered unless valid reconstruction is demonstrated are numbers 1-7, 9, 11-18, 26, 32, 42, 43, 68, 70, 77, and 88.

The second group includes all parameters that may be filtered without further showing by the certificate holder. We have found that filtering these parameters still results in acceptable recorded data as long as the accuracy and all other requirements of the applicable appendix are met. A significant number of parameters in this group are those that have only two states, on or off. These are known as discretely. We received several comments indicating that the information from these parameters is not affected by filtering. There are also discretely that may have three or four preprogrammed fixed values as their output, and are recorded as a binary numerical representation (BNR). Examples are traffic alert and collision avoidance system (TCAS), electronic flight instrument system (EFIS) display, and primary navigation system reference. Filtering these parameters would not result in any non-programmed value being recorded, nor would it affect the determination of the value at a given time. Other parameters included in the 'may be filtered' group are secondary flight control surfaces and input positions, such as trailing and leading edge flaps and pitch trim surface position. Filtering does not appear to affect an investigator's ability to determine the position of this equipment. Parameters that may be filtered without further action are numbers 8, 10, 19-25, 27-31, 33-41, 44-67, 69, 71-76, and 78-87.

The option not to filter any or all parameters remains an acceptable means of compliance with the regulations. In all cases, the accuracy and all other requirements of Appendix M (or Appendix E or Appendix F) must continue to be met. The ability to reconstruct data does not forgive any appendix requirement for any parameter. For purposes of this SNPRM, when we refer to Appendix M in our response to a comment, this response also applies to operations covered by

Appendix E to part 125 or Appendix F to part 135 unless otherwise noted.

The proposed time for compliance with this rule is four years after the effective date of the final rule. Within that four-year period, one of two things must happen.

If a certificate holder elects not to filter any of the restricted parameters, it has four years to test its DFDR systems, verify that none of the restricted parameters are being filtered, or, if any restricted parameter is being filtered, modify that parameter.

If a certificate holder chooses to filter a restricted parameter and show by test and analyses that the originating signal can be reconstructed, the procedures for reconstruction would have to be submitted to the FAA after the next heavy maintenance check of an airplane (beginning six months after the effective date of the final rule), but not later than two years after the effective date of the final rule. If a certificate holder has several of the same make, model and series airplane (group) with the same certificated DFDR system installed, the procedures need only be submitted once for the entire group of airplanes with identically installed systems. The compliance date for a group would be tied to the first airplane going in for a heavy maintenance check six months after the rule is final. Submission of the data to the FAA would be required no later than the time the first airplane of a group completes that heavy maintenance check. This compliance schedule is intended to allow the FAA to determine that the submitted reconstruction procedures are repeatable, but still allow time for other compliance action (within the four years) if repeatability is not accomplished. A certificate holder that is unable to show repeatability for any restricted parameter would be required to modify the parameter to eliminate filtering before the four-year compliance period ends.

We have not included in the rule text a time limit for submission of the reconstruction procedures to the NTSB following an accident or occurrence that requires the NTSB be notified. We presume that the reconstruction data are included as part of the recorder and its data that are subject to § 121.344(i) and the NTSB's authority under 49 CFR 830. We invite comment on whether a specific, brief time for submission needs to be included separately in the rule for the reconstruction procedure data.

## II. Discussion of Comments to the NPRM

### A. Summary of Comments

The FAA received 16 comments in response to the 2006 NPRM. AirTran Airways, L3 Communications, the National Transportation Safety Board and two individuals supported the intent of the 2006 NPRM, but offered detailed changes.

The Air Transport Association (ATA), Airbus, Boeing, FedEx, Dassault Aviation, Northwest Airlines and the Regional Airline Association (RAA) opposed the proposed rule. They also recommended that any final rule should only apply to newly manufactured airplanes.

The remaining commenters did not specifically state support or opposition, but suggested changes to the proposed rule.

### B. Definition of a Filtered Flight Data Signal

We proposed to define when a flight data recorder signal is filtered as occurring when an original sensor signal is changed in any way, other than changes necessary to:

- (1) Accomplish analog to digital conversion of the signal;
- (2) Reformat a digital signal into a DFDR-compatible format; or
- (3) Eliminate a high-frequency component of a signal that is outside the bandwidth of the sensor.

Boeing stated that it uses methods other than those in the proposed definition to enhance the quality of original sensor signals by protecting them against aliasing and noise. These methods go beyond the three specific kinds of processing allowed under the proposed definition and would be prohibited. Boeing suggested that the proposed list of acceptable signal conditioning is incomplete and does not allow for technological advances. Boeing indicated its preference for a more general definition, and suggested the following:

“Filtered data is that for which the actual sensor signal is amended, altered, modified, or changed in any manner such that it cannot be readily retrieved using existing, easily understood instructions and commonly available tools and techniques.”

Boeing's concern that its signal conditioning methods would be prohibited is unfounded. Anti-aliasing techniques and noise removal are each different methods of eliminating high-frequency components of a signal. High-frequency components are not necessarily outside the bandwidth of the sensor. The eliminated high-frequency

component of a signal can be within the operational bandwidth of a sensor, but outside the operational bandwidth of a parameter. In this case, anti-aliasing and noise reduction techniques, by our definition, would be an acceptable form of filtering.

Accordingly, we do not agree that a more general definition than that proposed would be appropriate. While Boeing noted that we used the more general definition in a June 2002 survey on filtering, that definition was not subject to the extensive analysis and review that we use when developing a definition for a regulation. When subjected to such analysis and review, the failings of the general definition become apparent. The general definition fails to address two common and acceptable changes—converting a signal from analog to digital and formatting a digital signal for DFDR compatibility.

It was unclear from the comments whether there was some misunderstanding of the phrase “operational bandwidth of the sensor” in paragraph (3) of the definition. Comments are invited regarding the application of this phrase in the context of the filtering definition.

### C. Appendix M Introductory Text

When we amended the DFDR regulations in 1997 to increase the number of parameters required to be recorded, we created Appendix M to part 121 (and comparable appendices in other parts). These appendices establish the upgraded technical requirements for each of the 88 parameters. The introductory text to Appendix M currently states:

“The recorded values must meet the designated range, resolution, and accuracy requirements during dynamic and static conditions. All data recorded must be correlated in time to one second.”

In the 2006 NPRM, we proposed language that would present a more detailed explanation of what we meant by the term “dynamic condition.” We proposed an additional sentence indicating that dynamic condition meant the parameter is experiencing change at the maximum rate available, including the maximum rate of reversal.

In its comment, the NTSB asked that we change the term “maximum rate available” to “maximum rate possible.”

The NTSB did not provide any rationale for this suggested change, and we are unable to agree that the term “maximum rate possible” is an improvement. Since we consider the word “possible” to include states that are well beyond the normal operational range of equipment, the suggested

change appears inappropriate as a regulatory standard. The proposed introductory text for Appendix M is unchanged from the 2006 NPRM.

#### *D. Parameters Covered by the Filtering Prohibition*

In drafting the 2006 NPRM, we reviewed each of the 88 parameters to determine which are too critical to allow any filtering beyond the proposed allowable signal conditioning. The parameters that met this critical performance requirement included flight control surface positions, flight control input positions and flight control input forces. We also determined that discrete signals should not be filtered since they, by definition, show that something is either on or off, and we knew of no need to filter these data. We sought comment on these choices.

While the 2006 NPRM proposed a general prohibition on filtering any flight data signal other than those specifically excepted, some commenters referred to those signals for parameters covered by the general prohibition as being on a "no filter" list. While this is not technically correct, we are using the term "no filter list" when discussing these comments to prevent further confusion.

Boeing asked that we remove discrete signals from the "no filter" list and provided several examples of how discrete signals are filtered. For example, Boeing noted that discrete signals may be filtered to eliminate false transitions that are typically encountered with mechanical devices. Boeing argued that the amount of signal conditioning that may be applied to a discrete signal should be determined by what is needed for the equipment to function as part of the overall aircraft design, not what is required for a DFDR recording. Boeing concluded that the DFDR should only be monitoring the status of functions interfaced with discrete signal inputs, and not dictating conditions that may prevent an improvement in signal integrity.

Airbus recommended that we add 33 parameters to the list of those that may be filtered. Airbus stated that the 33 parameters are not related to flight controls or flight control inputs, and that there would be "no critical loss of information" even if the raw data were not recorded.

The ATA questioned why we included the majority of the 46 parameters covered by the filtering prohibition when they do not relate to primary flight controls. The ATA noted that only 6 of the 88 recorded parameters (7 in airplanes manufactured

after August 18, 2002) record inputs to, or surface positions of, primary flight controls. The ATA also argued that we should not include discrete signals because their inclusion could expose certificate holders to technical noncompliance when the prohibition serves no purpose. The ATA recommended that the prohibition on filtering be limited to parameters numbers 12 through 17, and 88.

We note first that, in our review of the parameters for this SNPRM, we reanalyzed each parameter (as suggested by Airbus) in light of the information provided by several commenters. We based our original proposal on two presumptions. First, we believed that currently operating airplanes did not record discretes in a manner that would be considered filtering under the proposed definition. Second, we thought that by prohibiting filtering of discrete signals, future system and data bus/network designs would not change these signals in a way that might prevent recording information accurately. However, based on the comments, we are now allowing discrete signals to be filtered under the language proposed in this SNPRM.

In contrast to the other commenters, the NTSB recommended we increase the number of parameters for which filtering is prohibited. The NTSB asked that we include time, pressure altitude, indicated airspeed, normal, lateral and longitudinal accelerations, heading, pitch, roll, radio altitude, angle of attack, brake pressure, yaw or sideslip angle, and hydraulic pressure. The NTSB characterized these parameters as critical, and noted that their signals could be distorted by filtering, and that filtering could introduce random timing biases that can change the timing of one parameter relative to another.

We agree with the NTSB's characterization of these parameters as critical for the work of accident investigators. Accordingly, we have included them in the list of parameters that are restricted in this SNPRM.

An individual who is an accident investigator also recommended that we include parameter numbers 9 (thrust/power on each engine) and 43 (additional engine parameters) in the list of those parameters for which signals may not be filtered. After our review, we agree that these two parameters are critical to accident investigators and they are included in the "no filter" list.

#### *E. Applicability*

##### 1. Existing and/or Newly Manufactured Aircraft

In the 2006 NPRM, we proposed that the prohibition against filtering apply to both existing and newly manufactured aircraft. While Airbus, Dassault Aviation, Northwest Airlines and the RAA opposed the proposed rule, they also suggested that any final rule should only apply to newly manufactured airplanes.

Airbus noted that covering only newly manufactured airplanes is less costly for all parties, since manufacturers would be able to combine new designs into other flight recorder system improvements. Airbus also noted that the filter conversion algorithms have been solved for in-service airplanes, concluding that the problem will not occur again, and thus there are no further benefits to be achieved by the proposed rule.

The RAA viewed the safety concerns expressed in the 2006 NPRM as applicable to the design and certification process, and thus better suited to newly manufactured airplanes.

As we stated in the 2006 NPRM, we considered the regulatory alternative of limiting the filtering prohibition to newly manufactured aircraft. While this approach is always less costly than a rule that affects the in-service fleet, it would also fail to address the large number of aircraft currently operating on which filtering is occurring. We are also concerned that failing to cover in-service aircraft could lead to future system modifications that result in more filtering.

Experience with the Boeing 767 and the Airbus A300 has shown that filtering has caused problems during accident investigations. We disagree that the efforts expended during the Flight 587 accident investigation to reverse-filter the critical rudder data account for all the benefits that might accrue from a stricter limit on filtering. We also disagree that there was an acceptable outcome following the investigation. The NTSB has not released any formal opinion that the results for the Flight 587 data reconstruction were satisfactory, or that the processes involved in that data reconstruction were acceptable. We recognize that data reconstruction, when satisfactory from an accuracy standpoint and shown to be repeatable, is an acceptable alternative. That is why we are issuing this SNPRM. We do not believe the problems uncovered by the Flight 587 investigation have been solved. Allowing airplanes to remain in

the fleet while filtering critical data is not an acceptable alternative.

## 2. Airplanes Omitted in the NPRM

In the 2006 NPRM, we inadvertently failed to include airplanes covered under § 121.344(b)(1) and Appendix B to part 121, and § 125.226(b)(1) and Appendix D to part 125. We had no reason for excluding these airplanes. While we realize that they are older airplanes, many of the parameters included in the proposed filtering restriction are among the 18 required to be recorded by these airplanes. These airplanes are now included in this SNPRM. We anticipate that some of the equipment installed on these airplanes may not be sophisticated enough to allow filtering. However, we do not know the exact composition of this fleet, and have determined that it is appropriate for airplanes covered by § 121.344(b)(1) or § 125.226(b)(1) to be subject to the proposed analysis to ensure that they are not filtering restricted parameters.

We are not including the older airplanes operating under § 135.152(a) or (b) because of the complex nature of the applicability in those paragraphs. The applicability of the filtering regulations for newer part 135 airplanes remains as proposed in the 2006 NPRM.

## 3. Part 129 Airplanes

Airbus stated that aircraft operating under part 129 (Foreign Air Carriers and Foreign Operators operating N-registered aircraft engaged in Common Carriage) may also be affected because § 129.20 references § 121.344 for applicability. Airbus concluded that omitting these airplanes from the cost/benefit analysis will result in more significant costs.

While the proposed rule would affect certain airplanes operating under part 129, the applicability of § 129.20 is limited to those airplanes registered in the United States. We included these airplanes in the cost/benefit analysis for the 2006 NPRM and in the cost/benefit analysis for this SNPRM.

## 4. Part 91 Airplanes

Both the NATA and the GAMA noted that the proposed regulation would have a significant cost and burden impact on the owners and operators of aircraft that are equipped with DFDRs as required under § 91.609. They each estimated that more than 5,500 aircraft would be affected, resulting in a \$9,000,000 impact on the general aviation community for no measurable benefit.

We did not propose any change to part 91 in the 2006 NPRM. The proposed regulations apply only to

airplanes operated under parts 121, 125 or 135. Part 91 certificate holders would not be affected by these regulations.

## F. Compliance Time

The proposed rule included a compliance time of four years for airplanes manufactured up to 18 months after the effective date of a final rule. Airbus, FedEx and Frontier Airlines asked for additional time to develop design solutions, manufacture parts, and perform modifications during scheduled heavy maintenance checks.

Airbus stated that it would need 18–24 months to develop new system analog to digital converter (SDAC) or electronic instrument system (EIS) software, plus an additional 2–3 years to complete the retrofit of over 800 airplanes. Frontier Airlines, which operates 34 Airbus airplanes, asked for at least eight years because Airbus has not designed or communicated a proposed solution for EIS–1 equipped airplanes.

FedEx proposed a compliance date of five years from the release of the new rule to coincide with the heavy maintenance check cycle for its A300/A310s (about 30 months).

The 2006 NPRM proposed that aircraft manufactured 18 months after the effective date of the rule be compliant at manufacture. Boeing asked that we provide a compliance date rather than a compliance period associated with a date of manufacture because Boeing does not normally provide a date of manufacture. Boeing also suggested that 18 months is insufficient to assess airplane designs, coordinate with parts suppliers if changes are needed, and incorporate any changes into production.

The compliance time proposed in this SNPRM is no longer tied to an airplane's date of manufacture. For those parameters that are restricted from filtering, a certificate holder has the choice of removing the filtering, or demonstrating by test and analysis that an original sensor signal value can be reconstructed from the filtered, recorded signal data. Verifying that there is no filtering occurring on the restricted parameters, or finding filtering and modifying the affected parameters is required within 4 years.

If a certificate holder discovers signal filtering and chooses to show that the data can be reconstructed by test and analysis, the compliance period begins six months after the rule's effective date, when an aircraft goes in for its next scheduled heavy maintenance check. If an airplane in for a heavy maintenance check has a DFDR system identical to other airplanes in a certificate holder's

fleet, compliance by test and analysis need only be submitted once for the entire group. This compliance schedule is intended to allow the FAA to determine that the submitted procedures are repeatable, but still allow time for other compliance action (within the four years) if repeatability cannot be accomplished.

A certificate holder that is unable to show repeatability for any restricted parameter would be required to modify the parameter to eliminate signal filtering before the four year compliance period ends.

We believe these compliance times provide ample opportunity for certificate holders to make choices about their equipment and conduct the necessary analyses during a regularly scheduled heavy maintenance visit, reducing potential impact on scheduled operations or additional out-of-service time. In addition, a four-year compliance time is consistent with FAA actions in previous flight recorder regulations and has been supported by the industry as an adequate time for retrofit and for introducing new system designs into aircraft being manufactured.

## G. Cost/Benefit Analysis

### 1. Inspection Cost

Boeing disagreed with the estimated cost of \$75 per airplane to assess an FDR system for filtering. While the 2006 NPRM suggests that this assessment is the responsibility of the operators, Boeing stated that it expects the operators to request Boeing to research individual FDR systems installed on its airplanes. Boeing stated that it will take a significant number of work hours to assess each airplane because of the complexity of unique configurations with interfacing systems. Out-of-production airplanes will also require more than one hour per airplane because of the research involved in determining the data frame and the service bulletins that have been incorporated over the years.

Airbus agreed with Boeing that our estimated cost of \$75 is too low.

The commenters misunderstood the underlying factor in our estimate of this cost. In the 2006 NPRM, we averaged the cost of these assessments over the entire fleet of approximately 14,000 affected airplanes. We did not mean to imply that each individual airplane would require a unique evaluation or that such an evaluation would cost \$75. Rather, a manufacturer would assess its airplane models and apply the analysis of each model to as many of its airplanes as have the same DFDR

system. We assumed that there was a high-level of similarity of DFDR systems within individual airplane models and a few analyses per model would suffice for most of the fleet. On that basis, our estimated total cost was about \$1 million to determine whether filtering was occurring.

#### 2. A300/A310 Retrofit Cost

In the Initial Regulatory Evaluation for the 2006 NPRM, we stated that Airbus reported that it had already completed the engineering analyses to modify the A300/A310 series airplane. Consequently, there would be no incremental engineering costs for these models because those costs have already been expended.

In its comment, Airbus stated that the engineering analysis to modify the A300/310 has not been completed. Therefore, we need to add these costs (about \$750,000) to our cost analysis.

Airbus also stated that it has not yet calculated the cost to modify the A320 family of airplanes. Frontier Airlines added that this lack of analysis is the reason it is unable to comment on the costs estimated for the proposed rulemaking.

As we stated in the proposed rule, we do not consider the cost of compliance with Appendix M for Airbus 300/310 and the A320 family to be a cost of this rule. Even though the 1997 regulations do not specifically prohibit filtering, the Flight 587 investigation revealed that the airplanes' recorded data did not meet the accuracy performance requirements of Appendix M. The cost of compliance for Airbus airplanes is the cost of complying with Appendix M, which has been in effect since 1997. This would be true whether we had ever proposed a change regarding filtering.

The added compliance option of this SNPRM does not change these circumstances. The recorded data for each parameter must meet all of the requirements of Appendix M, whether the data are recorded unfiltered or are filtered and can be reconstructed.

#### 3. Risk Assessment

The RAA considers the FAA's Safety Management System (SMS) to be applicable to all rulemaking activities. Given the low accident rate of commercial air carriers over the last 10 years, the RAA does not consider this rulemaking to be justified under the SMS. The RAA considered the likelihood that an accident in which the elimination of signal filtering will make a difference in the accident's investigation to be extremely remote. The RAA concluded that the FAA

should conduct a risk assessment before issuing a final rule.

The SMS initiative is still under development at the FAA, and it will cover much more than proposed regulatory changes. There is nothing to suggest that it will require every rulemaking be subject to a full risk analysis, and those that are will most likely be chosen on a case-by-case basis. Regarding this rule, we already know that signal filtering has complicated accident investigations, and allowing filtering to continue is unacceptable. Further, until we get more information on the estimated costs of this rule and the option added in this SNPRM, we would not have sufficient data to support a risk analysis.

#### 4. Benefits Not Demonstrated

The ATA questioned the basis for the proposed rulemaking. The ATA stated that this rulemaking is not based on a demonstrated inability of existing FDRs to realize their intended function, which is to aid in the determination of the probable cause of an accident.

The NTSB has repeatedly stated that filtered flight data have hampered its investigations. This issue is of such a concern to the NTSB that it has issued several recommendations to address it specifically. The NTSB has found that existing FDRs are unable to fulfill their intended function when filtered flight data are recorded. We agree with the NTSB's findings.

The ATA also indicated that prior experience with filtered flight data does not represent a pressing aviation safety need. Other than the loss of Flight 587, prior filtering events occurred 14 to 15 years ago with no resulting injuries.

We cannot discount the loss of Flight 587 (and its 260 passengers and crew) and the lessons we learned from investigation of that accident. Whenever an accident occurs, it is critical that the NTSB has accurate flight data to determine the probable cause of the accident. In addition, we need accurate data to determine whether we need to take action to prevent future accidents. We know that there are hundreds of airplanes operating with DFDR systems that filter critical flight data before it is recorded. We will not allow that situation to continue when the known result is data that cannot be accurately replicated when needed for accident investigation. The risk continues to exist. More importantly, such signal filtering has hidden the underlying problem that the recorded data are not in compliance with the accuracy requirements of Appendix M, which went into effect in 1997.

The ATA also noted that Airbus has developed algorithm-based methods for reconstructing the filtered signals in its airplanes to establish actual system performance histories. These methods should be sufficient to prevent the potential for filtered data to impede any future investigation, minimizing the value of the proposed rule.

The NTSB has never been satisfied with the results of the 'reverse filtered' data from the Flight 587 accident investigation, nor the time it took to get it. The method used has never been subject to FAA review or approval, and without this proposed rule, the use of reconstructed data is not authorized. There is also no regulatory requirement to develop or maintain proper methodologies for data reconstruction. The Flight 587 accident demonstrated a deficiency in our own flight recorder rules that cannot be satisfactorily addressed by after-the-fact efforts.

#### H. Harmonization

Three commenters (Airbus, Boeing, Embraer) expressed the need for harmonization of FAA requirements with those of other civil aviation authorities. The commenters raised concerns that industry will be faced with conflicting requirements, high costs of compliance, and potentially complex system designs in an attempt to satisfy two different sets of regulations. They view harmonization as an opportunity to standardize flight recorder requirements.

The FAA is working with the European Aviation Safety Agency (EASA), ICAO and other non-U.S. regulatory authorities to harmonize our regulations whenever possible. While we support harmonization, our efforts regarding filtered flight data are considerably ahead of other aviation authorities worldwide. Since the NTSB has already encountered problems, we are moving forward with our efforts to correct known deficiencies and forestall future problems that might be corrected by new designs. We remain open to assisting other aviation authorities that seek to benefit from our discoveries and experience with these regulatory efforts.

#### I. Propriety of Change to Part 121

While AirTran supported the intent of the 2006 NPRM, it opposed using the operating rules of part 121 to impose technical requirements unique to a specific model of aircraft or unique to the design of an aircraft system. AirTran believes the proposed requirement to be outside the scope of part 121. AirTran noted that operators do not typically install or alter components that affect filtering of DFDR data, and data filtering

is a function of the DFDR system design and not the responsibility of the operators.

While we understand AirTran's position, DFDR requirements are a part of the operating rules. The only effective way to implement changes to currently operating aircraft are through the operating rules. For the most part, our certification rules are not retroactive. Since the parameters that we are specifying as restricted exist only in parts 121, 125 and 135, a change to part 25 would be confusing while not changing the impact on certificate holders.

AirTran also stated that it would like to see the flight recorder rules of part 121, 125, and 135 reviewed to redefine responsibility based on capability. AirTran suggested that information such as correlation of parameters at certification, filtering of parameters, and other data that are beyond the capabilities of most operators be placed in a special federal aviation regulation (SFAR). This could be accomplished by the manufacturers who have the expertise and data to provide the analysis. The results of this analysis should come to the operators in the form of FAA approved instructions for continued airworthiness to ensure continued compliance, similar to § 121.370(b) regarding fuel tanks.

We appreciate AirTran's input. Such an approach would, as suggested, require considerable rulemaking and an assessment of the impact on manufacturers for equipment that may vary considerably between certificate holders. While we will keep AirTran's comments under advisement, we have determined that there is an immediate need to correct the current problems and prevent future ones. The comments to the proposed rule also indicate that aircraft manufacturers know their roles in compliance.

#### *J. Conflicts With Other Proposed DFDR Regulations*

The ATA stated that the changes proposed in the 2006 NPRM are not coordinated with other flight recorder changes proposed separately. The ATA stated that the proposed filtering changes are redundant of the changes proposed in our NPRM entitled "Revisions to Cockpit Voice Recorder and Digital Flight Data Recorder Regulations" (70 FR 9752; February 28, 2005). The ATA noted that seven of the parameters that we proposed to have increased recording rates in the 2005 NPRM are also proposed to be restricted from filtering. The ATA stated that both changes are not "needed to derive flight

control histories or accomplish the intended purpose of FDRs."

The ATA also stated that the filtering proposal is not fully coordinated with the SNPRM entitled "Revisions to Digital Flight Data Recorder Regulations for Boeing 737 Airplanes and for Part 125 Operators" (71 FR 52382; September 5, 2006). The ATA reiterated its disagreement with the proposed rule for 737s, and stated that if the FAA goes forward with both rules, the compliance times must be coordinated for 737s. The ATA is also concerned with the impact of filtering changes on older 737s that only record 18 parameters, and were specifically not required to upgrade equipment in the 1997 rule changes.

We disagree in both instances. The proposed rule for Boeing 737 airplanes would add three additional parameters that are not part of this rule, and that proposed rule does not speak to filtering. As to their coordination, both rules are proposals, with one addressing the addition of three parameters on one specific model of airplane, and this rule addressing the propriety of filtering certain parameters on all airplane models. The FAA will consider the filtering status of the proposed 737 parameters when a final rule is promulgated.

Similarly, the 2005 NPRM addressed many topics, but filtering was not one of them. Both data sampling rates and filtering affect what gets recorded and can play major roles in data integrity and unrecoverable loss of data. But the two factors are separate and the proposed solutions are not inconsistent. The ATA states that both modifications are not necessary to achieve the "intended purposes of FDRs" but does not state what it sees as this purpose. History has already shown that filtered signals can raise serious questions in an accident investigation. It is also accepted that lower sampling rates provide much less reliable data. While the two characteristics of recorded data are related, they are not as inextricably intertwined as the comment suggests. The two proposals result from different problems and analyses, and reflect upgrades in technology that were not anticipated when the previous regulations were written.

#### *K. Exemption Request*

The RAA asked that we add a provision that allows for deviations for the current fleet "upon approval by the Administrator." The RAA was unconvinced that, given what the NTSB now knows about the characteristics of the Airbus FDR parameters, the Board would be unable to successfully and timely complete an investigation of a

future accident on an Airbus airplane that filters data. The RAA does not support a retrofit program for any aircraft type until the characteristics of the filtered data are known to be sufficiently nonresponsive. The RAA's proposal would allow a certificate holder that has a deviation to avoid a costly retrofit if the deviation is considered minor and would not hinder a future NTSB accident investigation.

We disagree with the RAA's premise that the NTSB would be able today to complete a timely and comprehensive accident investigation of an Airbus airplane that filters data. While significant work was put into data reconstruction during the Flight 587 investigation, the Board has never stated its satisfaction with the reconstruction. In addition, Airbus has never been required to formalize the analysis or results or maintain any data reconstruction technique. Nor can we support the inclusion of some unspecified deviation that would allow for an incalculable number of different flight recorder system changes that would only worsen the problem of data reconstruction from individual airplanes.

#### *L. Relationship to the 1997 Regulations*

The ATA submitted a lengthy comment on what it considers the effect of the 1997 rule. While the ATA correctly concluded that the 1997 rule does not specifically prohibit filtering, it is not clear how the ATA connected this rule to the amount of data being recorded, or how it could provide "more valuable raw data."

We are unable to respond to this because we do not understand the connection the ATA is trying to make between filtering and recording greater amounts of data. The FAA has never made any correlation between filtering and the amount of data being recorded, nor was it addressed in the 1997 rule.

Airbus noted that the preamble language to the 1997 rule says "the standards proposed are harmonized with the current JAR-OPS, which will be based on ED-55 standards." Airbus commented that the ED-55 recommendation to correlate recorded data to flight deck display led it to record filtered rudder data.

We believe this is Airbus's interpretation of its compliance with ED-55. Airbus appears to have concluded that the recorded rudder data must be the same "smoothed" data that are displayed in the cockpit, and that to be correlated, the data must be filtered. However, correlation does not require that identical data be recorded and displayed in the cockpit. Correlation

requires a mathematical relationship between the displayed and recorded data, not that recorded data be filtered.

Although the 1997 rule language does not specifically prohibit filtering, in the case of Flight 587, the data recorded were not in compliance with the accuracy requirements of part 121 Appendix M. This failure to meet Appendix M, and not the fact that the data were filtered, has always been the compliance issue following the Flight 587 investigation.

**III. Regulatory Notice and Analysis**

*Paperwork Reduction Act*

This proposal contains the following new information collection requirements. As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), the FAA has submitted the information requirements associated with this proposal to the Office of Management and Budget for its review.

*Title:* Filtered Flight Data.

*Summary:* The FAA is amending its proposal to prohibit the filtering of some

original flight recorder sensor signals. Comments to the notice of proposed rulemaking published on November 15, 2006, and changes in available technology have caused us to re-examine our position on data filtering. We are now proposing that certain critical data parameters may be filtered if a certificate holder can show that the data can be accurately reconstructed. This proposed rule would improve the accuracy and quality of the data recorded on digital flight data recorders while giving aircraft designers and operators more flexibility in system design and operation where allowable, including an option to filter data.

*Use of:* This information collection supports the Department of Transportation's strategic goals on safety and security. If a certificate holder chooses to show that filtered data from certain critical data parameters can be accurately reconstructed, the certificate holder must maintain documentation of the procedure required to perform the reconstruction. This will allow the FAA

and accident investigators to access accurate data promptly.

*Respondents (including number of):* The likely respondents to this proposed information requirement are those certificate holders that use a flight data recorder system that filters the data from any of the critical data parameters.

*Frequency:* The proposal would require operators to have a one-time engineering analysis performed (spread over two years) to evaluate whether the DFDR systems on their airplanes record certain flight data parameter signals after they have been filtered.

*Annual Burden Estimate:* Since the one-time engineering analysis will be performed on individual type certified DFDR systems, we estimate that there would be 16 of these engineering analyses that would be completed and that each would require an average of 16 hours of engineering time to complete and submit to the FAA.

The total burden is estimated as follows:

Documents required to show compliance with the Final Rule	One-time hours	Present value discounted cost (in \$2008)
Report to FAA of an Engineering Analysis of whether Certain Flight Data Parameters Are Being Filtered before Being Recorded .....	256	\$28,160
Total .....	256	28,160

This rule will result in a minimal annual recordkeeping and reporting burden.

The agency is soliciting comments to—

(1) Evaluate whether the proposed information requirement is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agency's estimate of the burden;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of collecting information on those who are to respond, including by use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Individuals and organizations may send comments on the information collection requirement by November 13, 2008, and should direct them to the address listed in the Addresses section at the beginning of this preamble. Comments also should be submitted to the Office of Information and Regulatory Affairs via facsimile at (202) 395-6974.

According to the 1995 amendments to the Paperwork Reduction Act (5 CFR 1320.8(b)(2)(vi)), an agency may not collect or sponsor the collection of information, nor may it impose an information collection requirement unless it displays a currently valid OMB control number. The OMB control number for this information collection will be published in the **Federal Register**, after the Office of Management and Budget approves it.

**International Compatibility**

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA has determined that there are no ICAO Standards and Recommended Practices that correspond to these proposed regulations.

**Regulatory Evaluation, Regulatory Flexibility Determination, International Trade Impact Assessment, and Unfunded Mandates Assessment**

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 (Pub. L. 96-354) requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (Pub. L. 96-39) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, the Trade Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by



State, local, or tribal governments, in the aggregate, or by the private sector, of \$100 million or more annually (adjusted for inflation with base year of 1995). This portion of the preamble summarizes the FAA's analysis of the economic impacts of this proposed rule.

Department of Transportation Order DOT 2100.5 prescribes policies and procedures for simplification, analysis, and review of regulations. If the expected cost impact is so minimal that a proposed or final rule does not warrant a full evaluation, this order permits that a statement to that effect and the basis for it to be included in the preamble if a full regulatory evaluation of the cost and benefits is not prepared. Such a determination has been made for this proposed rule. The reasoning for this determination follows:

This SNPRM proposes to allow certain parameters to be filtered if the certificate holder can show that the data can be reconstructed. The expected economic impact would be a minimal cost with positive net benefits and, therefore, a regulatory evaluation was not prepared. To estimate the costs for any final rule, we request specific economic data in response to the questions in this section.

The FAA has, therefore, determined that this proposed rule would not be a "significant regulatory action" as defined in section 3(f) of Executive Order 12866, and would not be "significant" as defined in DOT's Regulatory Policies and Procedures.

#### Aviation Industry Affected

The proposed rule would apply to all aircraft operated under parts 121, 125, and 135 and required to have a DFDR system. Aircraft operated under other FAR parts would not be affected.

#### Benefit and Cost Methodology

The baseline for determining the proposed rule's benefits and costs is that each affected aircraft must be in compliance with appendix B or M of part 121, appendix D or E of part 125, or appendix F of part 135.

The first step in assessing costs of this SNPRM is for each certificate holder to determine whether any of its aircraft are filtering DFDR data before it is recorded. For purposes of filtering, we have divided the 88 required parameters into two groups:

- Those parameters that may not be filtered unless the certificate holder can demonstrate that the original sensor signal data (values) can be reconstructed using a valid, repeatable procedure (1–7, 9, 11–18, 26, 32, 42, 43, 68, 70, 77, and 88); and

- Those parameters that may be filtered without this demonstration as long as the accuracy requirements are met (8, 10, 19–25, 27–31, 33–41, 44–67, 69, 71–76, and 78–87).

A certificate holder must first determine whether any of the original sensor signal data from any of the parameters in the first group are filtered before being recorded. The cost of this determination is a cost of this proposed rule.

If no parameters in the first group are being filtered, no further action is required, and the only cost is reporting this status to the FAA.

If any of the parameters in the first group are being filtered, the certificate holder must determine whether the recorded data meet the accuracy requirements of the applicable appendix. If the requirements are met, no further action is necessary, and the only cost attributable to this rule is to report the status to the FAA.

If the requirements of the applicable appendix are not being met, the allocation of costs will depend on the option chosen by the certificate holder to address the non-compliance. If a certificate holder chooses to remove the filtering in order to comply with Appendix M, the cost is attributable to compliance with the 1997 rule. If a certificate holder chooses to show by test and analysis that the data can be acceptably reconstructed, the cost is attributable to this proposed rule because it is a new option in this SNPRM. We are requesting estimates of the costs of these two options and their expected use.

#### Benefits

The benefit of this proposed rule would be to make accurate flight data more quickly and unambiguously available to accident investigators. Inaccurate data have been shown to delay accident analysis, and could suggest unnecessary corrective action. These were experienced during the Flight 587 accident investigation.

#### Benefit Cost Analysis

We believe that the SNPRM would provide a less costly means than the 2006 NPRM for certificate holders to address compliance with the applicable appendix. It will also provide accident investigators with the more accurate and less ambiguous data necessary to determine the causes of airplane accidents.

To estimate the costs of a final rule, we need data on the costs of complying with this SNPRM. We are requesting the following information, including any supporting documentation:

1. The aircraft makes, models and series in your fleet.
2. The number of each aircraft make, model and series in your fleet.
3. By aircraft make, model and series, how many type certificated DFDR systems are installed in your aircraft.
4. For each installed DFDR system, by characteristics, determine the parameter numbers in the first group that are filtered before being recorded. For any filtered parameter, which do not meet the accuracy requirements of Appendix B or M (or Appendix D or E or Appendix F)?
5. For the information requested in #4, do you have the technical capability to determine the characteristics yourself or is outside technical expertise required? How many engineering hours would be needed to determine whether the DFDR system is recording filtered flight data for the first group of parameters? What other costs would be required for this analysis?
6. For each installed DFDR system that records filtered data for the first group of parameters (the data for which do not meet either Appendix B or M, Appendix D or E or Appendix F), how much would it cost to remove the filtering?
7. For each installed DFDR system that records filtered data for the first group of parameters (the data for which do not meet either Appendix B or M, Appendix D or E or Appendix F), how much would it cost to develop and accomplish the tests and analyses required to comply with the reconstruction option proposed in this SNPRM?

#### Regulatory Flexibility Analysis

The Regulatory Flexibility Act of 1980 (Pub. L. 96–354) (RFA) establishes "as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration." The RFA covers a wide range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory

flexibility analysis as described in the RFA.

However, if an agency determines that a rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA provides that the head of the agency may so certify and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

While we have only limited information on the costs of this proposed rule, that information suggests that the rule would be unlikely to have a significant impact on a substantial number of small entities. We are specifically requesting information regarding the effect on small entities to assist in our final analysis.

Therefore, the Acting Administrator certifies that this proposed rule would not have a significant economic impact on a substantial number of small entities.

#### International Trade Analysis

The Trade Agreements Act of 1979 (Pub. L. 96–39) prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. The FAA has assessed the effects of this SNPRM and notes that its purpose is to ensure the safety of the American public and thus the proposed rule is not considered as creating an unnecessary obstacle.

#### Unfunded Mandates Act

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of \$100 million or more (adjusted annually for inflation with the base year 1995) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a “significant regulatory action.” The FAA currently uses an inflation-adjusted value of \$136.1 million in lieu of \$100 million.

The proposed rule does not contain such a mandate; therefore, the requirements of Title II of the Act do not apply.

#### Executive Order 13132, Federalism

The FAA has analyzed this proposed rule under the principles and criteria of Executive Order 13132, Federalism. We determined that this action would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore, would not have federalism implications.

#### Environmental Analysis

FAA Order 1050.1E identifies FAA actions that are categorically excluded from preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act in the absence of extraordinary circumstances. The FAA has determined this proposed rulemaking action qualifies for the categorical exclusion identified in Chapter 3, paragraph 312f and involves no extraordinary circumstances.

#### Regulations That Significantly Affect Energy Supply, Distribution, or Use

The FAA has analyzed this SNPRM under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). We have determined that it is not a “significant energy action” under the executive order because it is not a “significant regulatory action” under Executive Order 12866, and it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

#### Additional Information

##### Comments Invited

The FAA invites interested persons to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, please send only one copy of written comments, or if you are filing comments electronically, please submit your comments only one time.

We will file in the docket all comments we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will

consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

#### Proprietary or Confidential Business Information

Do not file in the docket information that you consider to be proprietary or confidential business information. Send or deliver this information directly to the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this document. You must mark the information that you consider proprietary or confidential. If you send the information on a disk or CD ROM, mark the outside of the disk or CD ROM and also identify electronically within the disk or CD ROM the specific information that is proprietary or confidential.

Under 14 CFR 11.35(b), when we are aware of proprietary information filed with a comment, we do not place it in the docket. We hold it in a separate file to which the public does not have access, and we place a note in the docket that we have received it. If we receive a request to examine or copy this information, we treat it as any other request under the Freedom of Information Act (5 U.S.C. 552). We process such a request under the DOT procedures found in 49 CFR part 7.

#### Regulations Affecting Intrastate Aviation in Alaska

Section 1205 of the FAA Reauthorization Act of 1996 (110 Stat. 3213) requires the Administrator, when modifying regulations in title 14 of the CFR in a manner affecting intrastate aviation in Alaska, to consider the extent to which Alaska is not served by transportation modes other than aviation, and to establish appropriate regulatory distinctions. Because this proposed rule would apply to the certification of future designs of transport category airplanes and their subsequent operation, it could, if adopted, affect intrastate aviation in Alaska. The FAA, therefore, specifically requests comments on whether there is justification for applying the proposed rule differently in intrastate operations in Alaska.

#### Availability of Rulemaking Documents

You can get an electronic copy of rulemaking documents using the Internet by—

1. Searching the Federal eRulemaking Portal (<http://www.regulations.gov>);

2. Visiting the FAA's Regulations and Policies Web page at [http://www.faa.gov/regulations\\_policies/](http://www.faa.gov/regulations_policies/); or

3. Accessing the Government Printing Office's Web page at <http://www.gpoaccess.gov/fr/index.html>.

You can also get a copy by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267-9680. Make sure to identify the docket number, notice number, or amendment number of this rulemaking.

#### List of Subjects in 14 CFR Part 121, 125, and 135

Air carriers, Aircraft, Aviation safety, Safety, Transportation.

#### The Proposed Amendment

In consideration of the foregoing, the Federal Aviation Administration proposes to amend Chapter I of Title 14, Code of Federal Regulations, as follows:

#### PART 121—OPERATING REQUIREMENTS: DOMESTIC, FLAG, AND SUPPLEMENTAL OPERATIONS

1. The authority citation for part 121 continues to read as follows:

**Authority:** 49 U.S.C. 106(g), 1153, 40101, 40102, 40103, 40113, 41721, 44105, 44106, 44111, 44701-44717, 44722, 44901, 44903, 44904, 44906, 44912, 44914, 44936, 44938, 46103, 46105.

2. Amend part 121 by adding a new § 121.346 to read as follows:

#### § 121.346 Flight recorders—filtered data.

(a) A flight data signal is filtered when an original sensor signal has been changed in any way, other than changes necessary to:

(1) Accomplish analog to digital conversion of the signal;

(2) Format a digital signal to be DFDR compatible; or

(3) Eliminate a high frequency component of a signal that is outside the operational bandwidth of the sensor.

(b) An original sensor signal for any flight recorder parameter required to be recorded under § 121.344 may be filtered only if the signal continues to meet the requirements of appendix B or M of this part, as applicable and—

(1) It represents a parameter described in § 121.344 (a)(1) through (7), (9), (11) through (18), (26), (32), (42), (43), (68), (70), (77), or (88) or the corresponding parameter in Appendix B of this part, and:

(i) The certificate holder is able to demonstrate by test and analysis that the original sensor signal value can be reconstructed from the recorded data;

(ii) The FAA determines that the procedure submitted by the certificate holder as its compliance with paragraph (b)(1)(i) of this section is repeatable; and

(iii) The certificate holder maintains documentation of the procedure required to reconstruct the original sensor signal value; or

(2) It represents a parameter described in § 121.344(a) (8), (10), (19) through (25), (27) through (31), (33) through (41), (44) through (67), (69), (71) through (76), or (78) through (87).

(c) *Compliance.* After [four years from effective date], no aircraft flight data recording system may filter any parameter listed in paragraph (b)(1) of this section unless the certificate holder possesses test and analysis procedures that have been approved by the FAA. The procedures must be submitted to the FAA no later than the completion of the next heavy maintenance check after [six months after effective date] but not later than [two years after the effective date].

3. Amend appendix M to part 121 by revising the introductory text immediately following the appendix title to read as follows:

#### Appendix M to Part 121—Airplane Flight Recorder Specifications

The recorded values must meet the designated range, resolution and accuracy requirements during static and dynamic conditions. Dynamic condition means the parameter is experiencing change at the maximum rate available, including the maximum rate of reversal. All data recorded must be correlated in time to within one second.

\* \* \* \* \*

#### PART 125—CERTIFICATION AND OPERATIONS: AIRPLANES HAVING A SEATING CAPACITY OF 20 OR MORE PASSENGERS OR A MAXIMUM PAYLOAD CAPACITY OF 6,000 POUNDS OR MORE; AND RULES GOVERNING PERSONS ON BOARD SUCH AIRCRAFT

4. The authority citation for part 125 continues to read as follows:

**Authority:** 49 U.S.C. 106(g), 40113, 44701-44702, 44705, 44710-44711, 44713, 44716-44717, 44722.

5. Amend part 125 by adding a new § 125.228 to subpart F to read as follows:

#### § 125.228 Flight recorders—filtered data.

(a) A flight data signal is filtered when an original sensor signal has been changed in any way, other than changes necessary to:

(1) Accomplish analog to digital conversion of the signal;

(2) Format a digital signal to be DFDR compatible; or

(3) Eliminate a high frequency component of a signal that is outside the operational bandwidth of the sensor.

(b) An original sensor signal for any flight recorder parameter required to be recorded under § 125.226 may be filtered only if the signal continues to meet the requirements of appendix D or E of this part and—

(1) It represents a parameter described in § 125.226(a)(1) through (7), (9), (11) through (18), (26), (32), (42), (43), (68), (70), (77), or (88) or the corresponding parameter in Appendix D of this part, and:

(i) The certificate holder is able to demonstrate by test and analysis that the original sensor signal value can be reconstructed from the recorded data;

(ii) The FAA determines that the procedure submitted by the certificate holder as its compliance with paragraph (b)(1)(i) of this section is repeatable; and

(iii) The certificate holder maintains documentation of the procedure required to reconstruct the original sensor signal value; or

(2) It represents a parameter described in § 125.226(a)(8), (10), (19) through (25), (27) through (31), (33) through (41), (44) through (67), (69), (71) through (76), or (78) through (87).

(c) *Compliance.* After [four years from effective date], no aircraft flight data recording system may filter any parameter listed in paragraph (b)(1) of this section unless the certificate holder possesses test and analysis procedures that have been approved by the FAA. The procedures must be submitted to the FAA no later than the completion of the next heavy maintenance check after [six months after effective date] but not later than [two years after the effective date].

6. Amend appendix E to part 125 by revising the introductory text immediately following the appendix title to read as follows:

#### Appendix E to Part 125—Airplane Flight Recorder Specifications

The recorded values must meet the designated range, resolution and accuracy requirements during static and dynamic conditions. Dynamic condition means the parameter is experiencing change at the maximum rate available, including the maximum rate of reversal. All data recorded must be correlated in time to within one second.

\* \* \* \* \*

**PART 135—OPERATING REQUIREMENTS: COMMUTER AND ON DEMAND OPERATIONS AND RULES GOVERNING PERSONS ON BOARD SUCH AIRCRAFT**

7. The authority citation for part 135 continues to read as follows:

**Authority:** 49 U.S.C. 106(g), 41706, 44113, 44701–44702, 44705, 44709, 44711–44713, 44715–44717, 44722.

8. Amend part 135 by adding a new § 135.156 to read as follows:

**§ 135.156 Flight recorders—filtered data.**

(a) A flight data signal is filtered when an original sensor signal has been changed in any way, other than changes necessary to:

(1) Accomplish analog to digital conversion of the signal;

(2) Format a digital signal to be DFDR compatible; or

(3) Eliminate a high frequency component of a signal that is outside the operational bandwidth of the sensor.

(b) An original sensor signal for any flight recorder parameter required to be recorded under § 135.152 may be filtered only if the signal continues to meet the requirements of Appendix F of this part and—

(1) It represents a parameter described in § 135.152(h)(1) through (7), (9), (11) through (18), (26), (32), (42), (43), (68), (70), (77), or (88), and:

(i) The certificate holder is able to demonstrate by test and analysis that the original sensor signal value can be reconstructed from the recorded data;

(ii) The FAA determines that the procedure submitted by the certificate holder as its compliance with paragraph (b)(1)(i) of this section is repeatable; and

(iii) The certificate holder maintains documentation of the procedure required to reconstruct the original sensor signal value; or

(2) It represents a parameter described in § 135.152(h)(8), (10), (19) through (25), (27) through (31), (33) through (41), (44) through (67), (69), (71) through (76), or (78) through (87).

(c) *Compliance.* After [four years from effective date], no aircraft flight data recording system may filter any parameter listed in paragraph (b)(1) of this section unless the certificate holder possesses test and analysis procedures that have been approved by the FAA. The procedures must be submitted to the FAA no later than the completion of the next heavy maintenance check after [six months after effective date] but not later than [two years after the effective date].

9. Amend appendix F to part 135 by revising the introductory text

immediately following the appendix title to read as follows:

**Appendix F to Part 135—Airplane Flight Recorder Specifications**

The recorded values must meet the designated range, resolution and accuracy requirements during static and dynamic conditions. Dynamic condition means the parameter is experiencing change at the maximum rate available, including the maximum rate of reversal. All data recorded must be correlated in time to within one second.

\* \* \* \* \*

Issued in Washington, DC, on July 24, 2008.

**Dorenda D. Baker,**

*Acting Director, Aircraft Certification Service.*

[FR Doc. E8–18933 Filed 8–14–08; 8:45 am]

**BILLING CODE 4910–13–P**

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 402**

[FWS–R9–ES–2008–0093]

**RIN 1018–AT50**

**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**50 CFR Part 402**

[0808011023–81048–01]

**RIN 0618–AX15**

**Interagency Cooperation Under the Endangered Species Act**

**AGENCIES:** U.S. Fish and Wildlife Service, Interior; National Marine Fisheries Service, Commerce.

**ACTION:** Proposed rule.

**SUMMARY:** The United States Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) (collectively, “Services” or “we”) propose to amend regulations governing interagency cooperation under the Endangered Species Act of 1973, as amended (Act). The Services are proposing these changes to clarify several definitions, to clarify when the section 7 regulations are applicable and the correct standards for effects analysis, and to establish time frames for the informal consultation process.

**DATES:** We must receive your comments by September 15, 2008 to ensure their full consideration in the final decision on this proposal.

**ADDRESSES:** Submit your comments or materials concerning this proposed rule in one of the following ways:

(1) Through the Federal eRulemaking Portal at [www.regulations.gov](http://www.regulations.gov). Follow the instructions on the Web site for submitting comments.

(2) By U.S. mail or hand-delivery to Public Comment Processing, *Attention:* 1018–AT50, Division of Policy and Directives Management, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, Suite 222, Arlington, VA 22203.

We will not accept e-mail or faxes. We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see the Public Comments section below for more information).

**FOR FURTHER INFORMATION CONTACT:**

Office of the Assistant Secretary for Fish and Wildlife and Parks, 1849 C Street, NW., Washington, DC 20240; *telephone:* 202–208–4416; or James H. Lecky, Director, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910; *telephone:* 301–713–2332.

**SUPPLEMENTARY INFORMATION:**

**Background**

The Endangered Species Act of 1973, as amended (“Act”; 16 U.S.C. 1531 *et seq.*) provides that the Secretaries of the Interior and Commerce (the “Secretaries”) share responsibilities for implementing most of the provisions of the Act. Generally, marine species are under the jurisdiction of the Secretary of Commerce and all other species are under the jurisdiction of the Secretary of the Interior. Authority to administer the Act has been delegated by the Secretary of the Interior to the Director of the FWS and by the Secretary of Commerce through the Administrator of the National Oceanic and Atmospheric Administration to the Assistant Administrator for NMFS.

There have been no comprehensive amendments to the Act since 1988. With the exception of two section 7 counterpart regulations for specific types of consultations, there have been no comprehensive revisions to the implementing section 7 regulations since 1986. Since those regulations were issued, much has happened: The Services have gained considerable experience in implementing the Act, as have other Federal agencies, States, and property owners; there have been many judicial decisions regarding almost every aspect of section 7 of the Act and its implementing regulations; and the Government Accountability Office has completed reviews of section 7 implementation.