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**DRAFT REGULATORY EVALUATION,
INITIAL REGULATORY FLEXIBILITY
DETERMINATION, TRADE IMPACT ASSESSMENT,
AND UNFUNDED MANDATES DETERMINATION**

**SUPPLEMENTAL NOTICE OF PROPOSED
RULEMAKING**

**SERVICE DIFFICULTY REPORTS
(14 CFR 121, 125, 135, and 145)**

**OFFICE OF AVIATION POLICY AND PLANS
OPERATIONS REGULATORY ANALYSIS BRANCH
APO-310**

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Executive Summary

On August 14, 1995, the Federal Aviation Administration (FAA) issued a Notice of Proposed Rulemaking (NPRM) titled "Operational and Structural Difficulty Reports," Notice No. 95-12 (60 FR 41992). The notice proposed to revise the reporting requirements for all air carrier certificate holders and certificated domestic and foreign repair stations concerning failures, malfunctions, and defects of aircraft, aircraft engines, systems, and components.

The reports submitted by certificated air carriers and foreign and domestic repair stations, known as service difficulty reports (SDR's), provide the FAA with airworthiness statistical data necessary for planning, directing, controlling, and evaluating certain assigned safety-related programs. The reporting system also provides FAA managers and inspectors with a means for monitoring the effectiveness of self-evaluation techniques employed by certain segments of the civil aviation industry.

The comment period for Notice No. 95-12 closed on November 13, 1995. The FAA has reviewed the comments and the changes recommended by the commenters and has made substantive changes to the proposed rule based on the comments received. Accordingly, the FAA is issuing this supplemental notice to give all interested parties an opportunity to comment on this modified proposed rule.

Two of the proposed sections would increase costs, while three would decrease costs. However, in a number of proposed sections, the changes would add reporting requirements for certificate holders. These additional requirements are for information that has not been collected before or had been collected through voluntary reporting. Therefore, because there is little or no historical data on this information, the FAA does not know how many extra reports these new requirements would generate. However, for all these proposed sections, the FAA believes that there would be few additional new reports and that the overall additional burden would be minimal.

Aside from the additional reporting requirements, this proposed rule would result in major cost savings. The workload of the principal maintenance inspector may be reduced and duplicate reports, as well as duplicate entries

in the Service Difficulty Report Subsystem, would be reduced. The only costs would be for software for the part 121 air carriers, as well as copies of reports from repair stations to customer air carriers who would no longer need to file SDR's. These proposed changes are expected to generate net cost savings of \$1.61 million (net present value, \$850,800).

In addition, this proposed rule might prevent some accidents in the future. The prevention of only one such accident could result in benefits of \$6.6 million (net present value, \$3.5 million).

Based on the proposed rule's cost savings and benefits, the FAA finds this proposed rule to be cost beneficial.

The proposed regulation would not have an impact on international trade, a significant economic impact on a substantial number of small businesses, or contain any Federal intergovernmental mandates or private sector mandates.

I. Introduction and Background

Executive Order 12866 (issued October 4, 1993) established the requirement that each agency shall assess both the costs and benefits of every regulation and propose or adjust a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. In response to this requirement, and in accordance with Department of Transportation policies and procedures, the FAA has estimated the anticipated benefits and costs of this rulemaking action. This analysis also contains a regulatory flexibility determination required by the 1980 Regulatory Flexibility Act, an international trade impact assessment, and an unfunded mandates determination.

On August 14, 1995, the FAA issued a Notice of Proposed Rulemaking (NPRM) titled "Operational and Structural Difficulty Reports," Notice No. 95-12 (60 FR 41992). The notice proposed to revise the reporting requirements concerning failures, malfunctions, and defects of aircraft, aircraft engines, systems, and components for air carrier certificate holders and for certificated domestic and foreign repair stations.

The reports, known as service difficulty reports (SDR's) and submitted by certificated air carriers and foreign and domestic repair stations, provide the FAA with airworthiness statistical data necessary for planning, directing, controlling, and evaluating certain assigned safety-related programs. The reporting system also provides FAA managers and inspectors with a means for monitoring the effectiveness of self-evaluation techniques being employed by certain segments of the civil aviation industry.

Currently, §§ 121.703 and 135.415 of Title 14, Code of Federal Regulations (14 CFR), require that holders of certificates issued under part 121 or part 135 submit reports on certain specified failures, malfunctions, or defects of specific systems and on all other failures, malfunctions, or defects that, in the opinion of the certificate holder, have endangered or may endanger the safe operation of an aircraft. Similarly, 14 CFR § 125.409 requires that part 125 certificate holders report the occurrence or detection of each failure, malfunction, or defect. In addition, 14 CFR §§ 145.63 and 145.79 contain provisions for certificated domestic and foreign repair stations, respectively, to report to the FAA serious defects

or recurring unairworthy conditions of any aircraft, powerplant, propeller, or component. This information is reviewed and evaluated by the assigned principal maintenance inspector (PMI) and mailed to the FAA's Mike Monroney Aeronautical Center in Oklahoma City, Oklahoma, for input into the Service Difficulty Reporting Subsystem (SDRS). The report data are entered into the SDRS and compiled to generate a weekly summary that is distributed to the appropriate entities and personnel. Additional review and evaluation of the data are accomplished at the Aeronautical Center to identify trends, and the appropriate FAA office is notified if trends or significant safety items are noted.

Sections 121.705 and 135.417 contain provisions for submitting a summary report to the FAA on known or suspected mechanical difficulties or malfunctions that interrupt a flight or cause unscheduled aircraft changes, stops, or diversions en route that are not required to be reported under § 121.703 or § 135.415, respectively. Section 121.705 also requires a summary report containing information on the number of aircraft engines removed prematurely because of a malfunction, failure, or defect and the number of propeller featherings that occur in flight for other than training purposes, demonstrations, or flight checks. Section 135.417 requires further summary reports on the number of propeller featherings that occur in flight for purposes other than training, demonstrations, or flight checks.

The comment period for Notice No. 95-12 closed on November 13, 1995. Comments on the proposed rule addressing numerous issues were received from individuals, part 121 and 135 certificate holders, aviation consulting firms, industry associations, manufacturers, and labor organizations. The FAA has reviewed the comments and the recommended changes submitted by the commenters and has made substantive changes to the proposed rule based on the comments received. This regulatory evaluation compares this proposed rule to the current requirements to identify the proposal's costs and benefits.

II. Proposal

The NPRM was based on the earlier joint discussions with representatives of the air carrier industry, recommendations from the Aviation Rulemaking Advisory Committee (ARAC), and an internal review of the SDR program. It was recognized

that improvements to reporting requirements and the SDR program were necessary. This Supplemental Notice of Proposed Rulemaking (SNPRM) presents actions to modify the NPRM based on comments and FAA internal review.

This SNPRM would modify the current reporting requirements for air carriers and repair stations to standardize report information and add new data collection requirements. The proposed rule also would explicitly permit the submission of the required reports in an electronic form. (This is mandated for part 121 certificate holders 1 year after the effective date of the final rule.) The electronic submission of SDR data would provide a data base that permits more timely dissemination of safety information. Data would be uploaded and available the next business day.

The proposed rule also would permit a part 121, 125, or 135 certificate holder to allow a certificated domestic or foreign repair station to submit SDR's to the FAA on behalf of the operator. This provision would eliminate duplicate reporting of a service difficulty by the operator. However, the part 121, 125, or 135 certificate holder would not be relieved of the responsibility of ensuring that these reports are submitted. If a repair station is authorized to submit a report on behalf of a part 121, 125, or 135 certificate holder, the repair station would be required to forward a copy of the report to that operator.¹

In the SNPRM, §§ 121.703, 125.409, and 135.415 would be revised to focus on the reporting of operational defects. In addition, portions of §§ 121.705 and 135.417 would be deleted, which would remove the requirements for reporting of propeller feathering. The proposed rule also would add new §§ 121.704, 125.410, and 135.416 specifically to address the reporting of structural defects. The proposal also

¹ It is important to note that the elimination of the air carrier operator's duplicate report would not diminish safety. The SDR system is a paperwork system used to spot equipment trends and to get an overview of airplane mechanical malfunctions by fleet type. SDR's are not intended to give an operational view of what is wrong with an operator's individual airplane. Based on the existing regulations, before an airplane can be put back into service, the air carrier will need to be aware of what was wrong and what corrective actions were taken. Alleviating the air carrier operator of the responsibility of submitting the same SDR that the repair station also submits does not lessen the information that the air carrier would have about their aircraft.

would revise specific requirements in part 125 to make them equivalent to the reporting requirements in proposed §§ 121.703 and 135.415.

Reporting requirements would be revised for each of the proposed sections to standardize report information. For example, required reporting information would include specific aircraft total time (and total cycles, if appropriate) to aid in evaluating aircraft structural fatigue. In addition, the amount of elapsed time since the last maintenance performed on components would be noted to determine how long components have been in service. Manufacturer's information would be required to assist analysis efforts.

III. Cost of Compliance

The FAA has performed an analysis of the expected costs and benefits of this regulatory proposal. In this analysis, the FAA estimated future costs for a 10-year period, from 1999 through 2008. As required by the Office of Management and Budget, the present value of this stream of costs was calculated using a discount factor of 7 percent. All costs in this analysis are in 1996 dollars.

Assumptions

Much of the costs and cost savings discussed in this analysis relate to the time it takes to process an SDR. The FAA estimates that a standard SDR currently takes 10 minutes to write, 10 minutes for a supervisor to review, 10 minutes for a PMI to review, and 10 minutes to be entered into the SDRS data base.

The FAA assumed the following hourly labor costs:

- The person writing the SDR - \$24.38;²
- The supervisor who reviews the SDR - \$27.50;
- A clerical/staff assistant - \$12.60;³

² Benefits for nongovernment employees are calculated by multiplying the base wage by 25 percent to account for employee benefits. Benefits were reported by the Future Aviation Professionals of America to be 15 percent of salary. The FAA has added 10 percent to account for FICA taxes and miscellaneous variable expenses to the employer.

³ This is based on using a nonloaded wage of \$9.84 as discussed in the 1990 Wage and Salary Handbook, National Airline Transport Association (NATA), page 8; this involves the use of the mean wage, \$8.84, paid

- The SDRS data entry person - \$21.05 (GS-9);⁴
- The PMI - \$36.30 (GS-13); and
- A data base or computer programmer - \$36.30 (GS-13).

From 1987 to 1996, about 37,000 SDR's were generated annually.⁵ The total number of certificate holders that would be affected by this proposed rule, as defined by 14 CFR,⁶ are as follows:

- Part 121 certificate holders - 156
- Part 125 and 135 certificate holders - 2,940
- Part 145 certificate holders - 4,599

Costs

Proposed §§ 121.703(d), 125.409(d), and 135.415(d) would require that the reports be made available for review for 30 days. The FAA contends that all certificate holders usually retain SDR's indefinitely; therefore, a 30-day retention requirement should not place any burden on the certificate holders.

Proposed §§ 121.703(e) and 121.704(d) would require that 1 year after the effective date of the rule part 121 certificate holders submit reports in an electronic form. This proposed revision is consistent with Department of Transportation requirements contained in 14 CFR §§ 234.4 and 241.19 for the electronic submission of certain reports and data.⁷ Electronic reporting necessitates having a computer and a modem; these are considered basic equipment for all certificate holders. The software needed to

Nationwide to the Secretary/CRT Operator/Word Processor category. This wage was updated to 1996 dollars using the GDP price deflator.

⁴ The cost requirements for all government personnel for the applicable GS level were obtained by multiplying the annual salary at the Step 5 level times the fringe benefits factor of 1.26. This fringe benefits factor was derived from Table 4-2, page 4-18, Economic Analysis of Investment and Regulatory Decision-A Guide, FAA-APO-82-1, January 1982.

⁵ Source: FAA Operational Systems Branch (AFS-640).

⁶ Based on information from Dunn & Bradstreet, April 1998,

⁷ Part 125 and part 135 certificate holders would retain the option of submitting the required information in electronic or paper form. Part 145 certificate holders also would retain this option unless the repair facility submits the information on behalf of a part 121 certificate holder in accordance with §§ 121.703(g) and 121.704(f).

interface with the SDRS would need to be installed in the first year and runs only on IBM-compatible systems; almost all part 121 certificate holders have such systems.

The costs associated with these sections would be for those certificate holders who use non-IBM compatible computers. It would be necessary for them to convert to an IBM-compatible system and for a programmer to install the requisite software. The FAA estimates that there are seven certificate holders who use Apple Macintosh computers, and that it would cost \$150 to install the software to allow these Macintosh computers to interface with an IBM-compatible system for a total cost of \$1,050.

The FAA also estimates that a computer programmer takes 1 hour to install the software necessary to interface with the SDRS at each location; the FAA would provide this software at no charge. Given the number of locations, this means that 184 computers would need to have the SDRS software installed. At the assumed hourly wage for computer programmers (\$36.30 per hour), the cost is approximately \$6,700. Total first year costs sum to approximately \$7,700 (net present value, \$7,200).

Proposed §§ 121.703(e) and 135.415(e) set out a list of data items that would be required. The FAA believes that there would be no cost impact from these changes and that the amount of time needed to enter the additional information onto the standardized reporting form, FAA Form No. 8070-2, would be offset by those data items that would no longer be required.

Proposed §§ 121.703(e)(8), 121.704(d)(7), 125.409(e)(8), 125.410(d)(7), 135.415(e)(8), and 135.416(d)(7) would revise the previously proposed requirement to allow air carriers to submit parts information that includes aircraft total time and total cycles.⁸ The proposal would require the submission of the total cycles (if applicable) as well as the total time of the aircraft, aircraft engine, propeller, or component. The FAA assumes that all air carriers currently

⁸ Because tracking the accumulation of aircraft cycles may not be a requirement for certain type designs, this information would only be required if applicable to these types. Also, the FAA would make the total time and total cycle information requirement more specific so that information on the affected part would be required rather than aircraft total time and total cycles only.

have this information due to existing regulations, so this added regulatory flexibility would not impose any costs on certificate holders and operators.

Proposed §§ 121.703(e)(9), 121.703(e)(10), 125.409(e)(9), 125.409(e)(10), 135.415(e)(9), and 135.415(e)(10) would add the requirement that the manufacturer, part number, part name, part serial number, and location of the malfunctioning item be submitted as part of the SDR. This information currently is available to air carriers and repair stations and is being included in some reports voluntarily now. Therefore, the FAA does not believe that requiring these items would add any additional time to filling out the reports, and hence, the FAA believes that there would not be any additional cost.

Proposed §§ 121.703(g), 121.704(f), 125.409(g), 125.410(f), 135.415(g), and 135.416(f) would permit part 121, 125, and 135 certificate holders to authorize a repair station to submit an SDR on their behalf. Proposed §§ 145.63(e) and 145.79(f) would require that the repair stations provide a copy of the report submitted by the repair station to the part 121, 125, or 135 certificate holder on whose behalf the report was submitted. These proposed sections would result in increased costs for the repair stations. However, these proposed sections would allow for cost savings by eliminating duplicate reports; repair stations would submit the report for input into the SDRS that is currently submitted by both repair stations and air carriers.⁹

In 1996, 2,311 repair station SDR's were entered into the SDR data base both from repair stations and air carriers, and the FAA assumes in this analysis that this number of reports is the maximum number that would not have to be generated and processed in the SDR system under this proposed section. Each report would be either mailed, faxed, or submitted by electronic mail (e-mail) from the repair station to the air carrier. The FAA also assumes in this analysis that all reports are mailed, and that it would take 5 minutes to make a photocopy (at 10 cents per copy) and to mail the report, and it would take 5 minutes for an employee of the air carrier to process and file this report. These tasks would be performed by an employee at the clerical/staff assistant level. All these factors would

⁹ The cost savings portion of this proposed section is covered in the section titled Cost Savings below.

increase costs, at a maximum, by approximately \$5,600 per year. Over 10 years, these costs could be as much as \$55,900 (net present value, \$39,300).

Request for Comments

In 15 proposed sections, the proposed changes would add reporting requirements for part 121, 125, and 135 certificate holders. These additional requirements are for information that has not been collected before or had been collected through voluntary reporting. Therefore, because there is little or no historical data on this information, the FAA does not know how many extra reports these new requirements would generate. However, the FAA believes that there would be few additional new reports and that the overall additional burden would be minimal. These new proposals would ensure that all appropriate information is collected and that there would be a better data base of information.

To provide the public with an estimate of the potential total impact of these sections, the FAA assumes that each of these proposed requirements could increase the total number of SDR's filed in 1 year by 1 percent, or 370 additional annual reports. The cost impact for each report would be based on the assumed time needed to process the SDR, including 10 minutes for each of the following actions: writing up an SDR, a review of it by the supervisor, and entering it into the SDR data base.

In addition, the FAA assumes that some of these reports would be filled out only at the repair station, which would necessitate sending an additional report to the air carrier operator, as described in the discussion of §§ 145.63(e) and 145.79(f) above. Using the assumed 1 percent, an additional 23 annual reports on average would need to be sent per proposed section.

Using these assumptions, the FAA calculated annual costs based on an additional 5,550 SDR's (370 reports x 15 sections) and on an additional 345 reports (23 reports x 15 sections) from the repair stations to the air carriers. Over 10 years, these costs sum to \$674,300 (net present value, \$473,600). The FAA requests comments on these assumptions; specifically, information is requested on what the extra number of reports and the total impact would be in each of these cases.

Proposed §§ 121.703(a)(1), 125.409(a)(1), and 135.415(a)(1) would specify that a certificate holder must report each failure, malfunction, or defect involving any fire, rather than only those fires that occur during flight as is currently prescribed by the regulations. The proposed changes would ensure that information also is reported on fires that occur on the ground because these fires may affect the safety of flight.

Proposed §§ 121.703(a)(2), 125.409(a)(2), and 135.415(a)(2) would require that any false fire warning or false smoke warning be reported, not just those that occur in flight as currently is required.

Proposed §§ 121.703(a)(3), 125.409(a)(3), and 135.415(a)(3) would require that information on damage to an engine, adjacent structure, equipment, or components caused by a failure, malfunction, or defect of an engine exhaust system be reported by the certificate holder regardless of whether such damage occurred in flight or on the ground. Current regulations require only that the certificate holder report such discrepancies occurring during flight.

Proposed §§ 121.703(a)(4), 125.409(a)(4), and 135.415(a)(4) would require that the failure, malfunction, or defect of aircraft components that causes an accumulation or circulation of smoke, vapor, or toxic or noxious fumes be reported. The current requirements only address these events if they occur in the crew compartment or passenger cabin during flight.

Proposed §§ 121.703(a)(5), 125.409(a)(5), and 135.415(a)(5) would require that the certificate holder report failures, malfunction, or defects involving all engine flameouts and shutdowns during ground or flight operations. The current rule only requires reports of such service difficulties if they occur during flight. The proposal would exclude intentional engine shutdowns, such as those that occur during flight crew training, test flights, and taxiing to reduce fuel consumption on the ground.

Proposed §§ 121.703(a)(6), 125.409(a)(6), and 135.415(a)(6) would require that the certificate holder report the failure, malfunction, or defect of any propeller feathering system or the ability of the system to control overspeed events whether such events occur during flight or on the ground. Current part 121 and 135 regulations only require reports of such service difficulties if they occur during flight.

Proposed §§ 121.703(a)(9), 125.409(a)(9), and 135.415(a)(9) would change the current wording "loss of brake actuating force" to "any detectable loss of brake actuating force" so as to clarify the interpretation of the term "loss." (Some air carriers have interpreted the term "loss" to mean total loss of braking action.)

Proposed §§ 121.703(a)(10), 125.409(a)(10), and 135.415(a)(10) would require the reporting of information relating to aborted takeoff. Currently, air carriers are not required to report information on aborted or "rejected" takeoffs.¹⁰

In proposed §§ 121.703(a)(12), 125.409(a)(12), and 135.415(a)(12), the FAA delineates a new reporting requirement for failures, malfunctions, or defects of autothrottle, autoflight, or flight control systems, or components that are not reported under the current regulations. At times, certificate holders have been voluntarily reporting such failures, malfunctions, or defects, but it is impossible to know how many have not been reported. Although such events could be reported under current § 121.703(c) or § 135.415(c), the SDR data base does not indicate that such reports are being made.

Proposed §§ 121.703(c), 125.409(c), and 135.415(c) would require the reporting of any failure, malfunction, or defect in an aircraft system, component, or powerplant that occurs or is detected at any time if that failure, malfunction, or defect has endangered or may endanger the safe operation of an aircraft. The phrase "in its opinion" would no longer be included in the rule language. Reports submitted under the

¹⁰ Even though limited information relating to aborted takeoffs that result from an accident or incident may be available through the FAA's Accident/Incident Data Subsystem (AIDS) or the National Transportation Safety Board (NTSB), the FAA is still requesting information on the number of such events from commenters.

proposed provision would provide the FAA with additional data concerning failures, malfunctions, or defects not otherwise specified in the proposed rule that involve modern, complex aircraft.

Proposed §§ 121.703(e)(11), 125.409(e)(11), and 135.415(e)(11) would require reports of those situations in which there are certain indications that may require an aircraft to return to the gate for precautionary reasons (e.g., an unusual or abnormal fuel quantity indication while taxiing for take-off). Such events may not require the use of emergency procedures; therefore, certain certificate holders may not currently report the information under the existing or previously proposed rules.

Proposed §§ 121.704(a)(3), 125.410(a)(3), and 135.416(a)(3) would include a reporting requirement whenever disbonding of any primary structure or principal structural element is detected. Currently, air carriers may report disbonding in accordance with §§ 121.703(c) or 135.415(c); the reporting of disbonding defects is necessary in the early identification of safety-of-flight issues associated with aging aircraft.

Proposed §§ 121.704(a)(4), 125.410(a)(4), and 135.416(a)(4) would require air carriers to report failures or defects repaired in accordance with approved data not contained in the manufacturer's maintenance manual.

Proposed §§ 121.704(b), 125.410(b), and 135.416(b) would require, in addition to the other reports listed above, certificate holders to report any other failure or defect that occurs or is detected in an aircraft structure if the failure or defect may endanger the safe operation of the aircraft. The phrase "in its opinion" would no longer be included in the rule language. As noted above, the proposed provision would provide the FAA with additional information concerning failures, malfunctions, or defects not otherwise specified in the proposed rule that involve modern, complex aircraft.

Proposed § 135.417 would require reports for all interruptions to flight regardless of whether they occurred in a single- or multiengine aircraft. Also, the FAA has added unscheduled engine removals caused by known or suspected mechanical difficulties to the list of items

required to be reported.¹¹ Current regulations require reports when there are interruptions to a flight on a multiengine aircraft; in most cases, any flight interruptions involving a single-engine aircraft operated under part 135 or unscheduled engine removals also are reported.

Total quantifiable costs, over 10 years, sum to \$738,000 (net present value, \$520,100).

Cost Savings

Several proposed provisions would create cost saving opportunities for the regulated entities.

Proposed sections §§ 121.703(d), 125.409(d), and 135.415(d) may reduce the PMI's workload. Currently, all reports go from the certificate holder to the Flight Service District Office (FSDO) where the PMI spends time reviewing the SDR before forwarding it to the SDRS in Oklahoma City. The proposal would require certificate holders to submit these reports directly to Oklahoma City, thus possibly reducing the PMI's workload. However, under the proposal, the certificate holder would still be required to make the SDR data available to the FSDO for examination.¹² This would allow PMI's to remain informed of SDR activity and improve the timeliness of getting the information into the SDRS, which would in turn improve the promptness and accuracy of the FAA processing of the data and increase the data's availability for analysis. Therefore, although PMI's would still remain informed, they may not have to spend their time forwarding the material. Currently, a PMI needs to spend 10 minutes reviewing each report and 5 minutes forwarding it; this 15 minutes spent per report could be reduced to 10 minutes for an inspection of each report.

Given an average of 37,000 reports annually and assuming this savings of 5 minutes per report, PMI's could save

¹¹ This change would facilitate the continued compilation of data for preparation of the FAA's Air Carrier Aircraft Utilization and Propulsion Reliability Report.

¹² Under both the current and proposed regulations, the PMI is still responsible for knowing about this information. In addition, SDR's are available under the Safety Performance Analysis System (SPAS) program that will be available at all FSDO's, so the PMI will always be able to access this information.

3,083 hours annually on this task. At a fully loaded hourly wage of \$36.30, this equals an annual cost savings of \$111,913. Over 10 years, this cost savings equals \$1.12 million (net present value, \$786,000).

The proposed changes in §§ 121.703(d), 125.409(d), 135.415(d), 145.63(a), and 145.79(c) allow an increase from 72 hours to 96 hours for the submission of the reports, which would allow more flexibility to the certificate holders but probably would not reduce costs more than minimally. However, it could result in fewer supplemental reports and a small cost savings; the FAA requests comments on any potential cost savings.

Proposed §§ 121.703(e)(13), 121.704(d)(9), 125.409(e)(13), 125.410(d)(9), 135.415(e)(13), and 135.416(d)(9) would add a requirement that an SDR include a unique control number for an occurrence.¹³ Not only would this proposal not generate any new costs, but it would yield benefits (which will be discussed in the next section) and some cost savings. Many certificate holders currently use such a number. Because all certificate holders need somehow to identify and assign a unique number to an SDR, adopting a uniform code is no more time consuming than developing another numbering system.

The cost savings result both from the reduction in the number of duplicate reports for the same occurrence in the SDR data base and the more simplified, methodical method for the FAA and industry to reference an SDR. Traditionally, when a supplemental report was submitted to the SDRS, each supplemental report was entered as if it were an original report, thus making it difficult to link it to the original report. Using a unique control number for each occurrence would reduce the duplication within the SDRS.¹⁴ The potential cost savings would be the amount of time spent to

¹³ As an example, a control number could begin with the first four alphanumeric characters of the submitter's certificate number. The next two numbers could be used to designate the calendar year in which the SDR is submitted. The remaining numbers could be generated by the submitter.

¹⁴ The time required to locate open SDR's in the data base to amend the SDR with the data from the supplemental SDR has been very labor intensive, requiring a manual search. This technique is not always successful and often requires additional time to call the certificate holder or the responsible inspector to verify data.

find and link these reports within the SDRS (30 minutes) times the wage rate of the data entry clerk times the number of supplemental reports submitted. The actual cost savings would almost certainly be lower because some certificate holders are voluntarily using a control number, so any cost savings that they have incurred would not have come about as a result of this proposed rule. The total number of supplemental reports affected by this proposed rule could be as high as 1,366 per year.¹⁵ This could yield cost savings as high as \$14,400 per year. Over 10 years, this sums to \$143,800 (net present value, \$101,000). The actual number of reports affected, and therefore the actual cost savings, would almost certainly be lower because some certificate holders are already using a control number.

Proposed sections §§ 121.703(g), 125.409(g), and 135.415(g) would reduce dual reporting. Currently, when a repair station identifies a failure, malfunction, or defect, this information is reported by both the repair station under § 145.63(a) or § 145.79(c), as appropriate, and the part 121, 125, or 135 certificate holder. Therefore, information about the same problem may be reported twice to the FAA. The proposed revision is intended to eliminate these duplicate reports. However, the certificate holder would not be relieved of the responsibility to ensure that these reports are submitted. The proposed rule would require that the part 121, 125, or 135 certificate holder receive a copy of the report submitted by the repair station.¹⁶

Cost savings would accrue, for each repair, both because of one less report needing to be generated and one less report needing to be entered into the SDRS. As mentioned above, in 1996, 2,311 repair station SDR's were entered into the SDR

¹⁵ An approximate yearly count for supplemental SDR's is 1,366. This is based on a 5-year average from January 1, 1986, to December 31, 1990, which is the latest data available.

In September 1991, AFS-640 implemented the SDR Electronic Data Entry Program (EDEP), which improved SDR tracking capability and reduced the time needed to process each SDR. The key element in resolving the tracking problem was the introduction of the "unique operator control number." This number enables the FAA and operator to easily reference an SDR because it is assigned by the operator. Previously, the computer assigned an "FAA control number," and it was the primary reference number in use. This number had little meaning to the certificate holders.

¹⁶ These costs were covered above in the section entitled Costs.

data base, so this analysis will assume that this number of reports would not have to be generated and processed. Based on the amount of time to write up, review, and enter the data (10 minutes each), the FAA estimates that these proposed changes would reduce costs by \$27,300 per year. Over 10 years, this cost reduction would sum to \$277,300 (net present value, \$194,800).

Proposed § 125.409 would require reports for specific events, rather than reports of the occurrence or detection of every failure, malfunction, or defect. The proposed change would eliminate the reporting of defects that do not compromise the airworthiness of the aircraft. The proposal would revise requirements to make part 125 equivalent to the requirements in proposed §§ 121.703 and 135.415. The FAA believes that any cost savings would be insignificant.

Total cost savings over 10 years sum to \$1.54 million (net present value, \$1.08 million). Total costs and cost savings can be seen in Table 1; these show a net cost savings of \$802,200 (net present value, \$561,600). Net cost savings could be different because of two factors:

- If any of the proposed sections on which the FAA has requested comments have higher costs than those assumed; and
- The total cost savings from using a unique control number almost certainly would be less than the amount shown in Table 1; however, the FAA does not have the data to determine how much less it would be.

Table 1 – 10-Year Costs and Cost Savings (1996 dollars)		
	Total Costs	Discounted Costs
COSTS		
§§ 121.703(e) and 121.704(d)	\$7,729	\$7,224
§§ 121.703(g), 121.704(f), 125.409(g), 125.410(f), 135.415(g), 135.416(f), 145.63(e) and 145.79(f)	\$55,926	\$39,281
Proposed sections on which the FAA requests comment.	\$674,349	\$473,623
TOTAL	\$738,004	\$520,128
COST SAVINGS		
§§ 121.703(d), 125.409(d), and 135.415(d)	\$1,119,129	\$786,009
§§ 121.703(e)(13), 121.704(d)(9), 125.409(e)(13), 125.410(d)(9), 135(e)(13), and 135.416(d)(9)	\$143,770	\$100,976
§§ 121.703(g), 125.409(g), 135.415(g)	\$277,320	\$194,773
TOTAL	\$1,540,219	\$1,081,758
NET COST SAVINGS	\$802,215	\$561,630

IV. Analysis of Benefits

These proposals would help to eliminate the number of duplicate reports that have been entered into this system. In addition, the increased interval for submitting reports should reduce the number of supplemental reports filed. A more efficient system would preserve and improve the integrity of the data base and allow for better and more complete analysis. Additional specific benefits of these proposals include standardizing reporting procedures among air carriers.

In addition to the above, the proposed regulations would enhance air carrier safety by collecting additional and more timely data that identify mechanical failures, malfunctions, and defects that may be a serious hazard to the operation of an aircraft. The information collected could be used to develop and implement corrective actions to help prevent future occurrences of these failures, malfunctions, and defects.

As noted above, the SDR system is used to identify trends and to provide an overview of product service data. Identifying these trends could help to catch problems early, which could allow Airworthiness Directives to be based on better information. In addition, an SDR will give an operator the ability to use trend information (and knowledge of potential problems) to better plan its

maintenance scheduling, a major benefit for airplane operators. In addition, the FAA believes that because of the improved SDR information resulting from these proposed regulations, additional information and equipment malfunction trends could be identified that would lead, over time, to safer airplanes.

V. Comparison of Costs and Benefits

This proposed rule would result in cost savings. Duplicate reports, as well as duplicate entries in the SDRS, would be reduced. The only costs would include software and hardware costs for the part 121 air carriers and copies of reports from repair stations to certificate holders who would no longer need to file SDR's. These proposed changes are expected to generate net cost savings over 10 years of \$802,200 (net present value, \$561,600).

In addition to eliminating the number of duplicate reports that have been entered into this system, the proposed regulations would enhance air carrier safety by collecting additional and more timely data that identify mechanical failures, malfunctions, and defects that may be a serious hazard to the operation of an aircraft. This data could be used to identify trends which could help to catch problems early and to better plan its maintenance scheduling. All of this could lead, over time, to safer airplanes.

Based on the proposed rule's cost savings and benefits, the FAA finds this proposed rule to be cost beneficial.

VI. Initial Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 establishes "as a principle of regulatory issuance that agencies shall endeavor, consistent with the objective of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the business, organizations, and governmental jurisdictions subject to regulation." To achieve that principle, the Act requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions. The Act 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 proposed or final rule will have a significant economic impact on a substantial number of small entities. If the determination is that it will, the agency must prepare a regulatory flexibility analysis (RFA) as described in the Act.

However, if an agency determines that a proposed or final rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the 1980 act provides that the head of the agency may so certify and an RFA is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

For this proposed rule, the small entity group is considered to be part 121, 125, and 135 air carriers (Standard Industrial Classification Code [SIC] 4512) and part 145 repair stations (SIC Code 4581, 7622, 7629, and 7699). The FAA has identified a total of 98 part 121 air carriers, 2,118 part 125 and part 135 air carriers, and 2,790 part 145 repair stations that would be considered small entities.

These proposed regulations would cost all air carriers \$396,400 (net present value, \$280,200) and repair stations \$64,300 (net present value, \$45,100) over the next ten years. On average, it would cost each individual air carrier \$15 per year and each repair station \$1 per year.

The FAA conducted the required review of this proposal and determined that it would not have a significant economic impact on a substantial number of small entities. Accordingly, pursuant to the Regulatory Flexibility Act, 5 U.S.C. 605(b), the Federal Aviation Administration certifies that this rule will not have a significant impact on a substantial number of small entities. The FAA specifically requests comments from small entities on this certification.

VII. International Trade Impact Statement

In accordance with the Office of Management and Budget memorandum dated March 1983, Federal agencies engaged in rulemaking activities are required to assess the effects of regulatory changes on international trade. There would be no impact on international trade for the domestic certificate holders affected by this proposed rule. In

addition, the impact on both domestic and foreign repair stations would be the same, so there would be no cost advantage to using either. Accordingly, there would be no impact on international trade.

VIII. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (the Act), enacted as Public Law 104-4 on March 22, 1995, requires each Federal agency, to the extent permitted by law, to prepare a written assessment of the effects of any Federal mandate in a proposed or final agency rule that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more (adjusted annually for inflation) in any 1 year. Section 204(a) of the Act, 2 U.S.C. 1534(a), requires the Federal agency to develop an effective process to permit timely input by elected officers (or their designees) of State, local, and tribal governments on a proposed "significant intergovernmental mandate." A "significant intergovernmental mandate" under the Act is any provision in a Federal agency regulation that will impose an enforceable duty upon State, local, and tribal governments, in the aggregate, of \$100 million (adjusted annually for inflation) in any 1 year. Section 203 of the Act, 2 U.S.C. 1533, which supplements section 204(a), provides that before establishing any regulatory requirements that might significantly or uniquely affect small governments, the agency shall have developed a plan that, among other things, provides for notice to potentially affected small governments, if any, and for a meaningful and timely opportunity to provide input in the development of regulatory proposals.

This proposed rule does not contain any Federal intergovernmental mandates or private sector mandates.