

Proposed Rules

Federal Register

Vol. 74, No. 84

Monday, May 4, 2009

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF ENERGY

10 CFR Part 600

RIN 1991-AB77

Assistance Regulations

AGENCY: Department of Energy.

ACTION: Proposed rule; reopening of comment period.

SUMMARY: The Department of Energy (DOE) published on May 16, 2008, a proposed rule concerning its financial assistance regulation. That proposed rule included a recodification of 10 CFR part 600. However, DOE inadvertently omitted one phrase from the existing part 600. This action will afford interested members of the public the opportunity to comment on the continued inclusion of this phrase in DOE's financial assistance regulations. **DATES:** Comments may be submitted on or before May 19, 2009.

ADDRESSES: Comments may be submitted online at <http://www.regulations.gov>. Comments may also be submitted by e-mail to jacqueline.kniskern@hq.doe.gov. Comments may be mailed to: Jacqueline Kniskern, Procurement Policy Analyst, MA-61 Forrestal Building, U.S.

Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585. Electronic submissions are encouraged.

FOR FURTHER INFORMATION CONTACT: Ms. Jacqueline Kniskern, Office of Procurement and Assistance Policy, U.S. Department of Energy, at 202-287-1342, or by e-mail at jacqueline.kniskern@hq.doe.gov.

SUPPLEMENTARY INFORMATION: On May 16, 2008, DOE published in the **Federal Register** a notice of proposed rulemaking (NPR) to amend its assistance regulations in 10 CFR part 600. (73 FR 28385) The notice proposed to amend part 600 consistent with The Energy Policy Act of 2005, to further implement the Federal Financial Assistance Management Improvement Act of 1999, and to make technical

corrections. The changes to part 600 are intended to simplify procedures for soliciting, awarding, and administering DOE's financial assistance agreements. The comment period for the proposed rule closed on July 15, 2008. DOE received no comments.

The May 16 NPR set out the portions of part 600 that were to be amended including the entirety of 10 CFR 600.6. As it appeared in the NPR, the text of § 600.6(c) omitted the phrase "or technology investment agreement" from the introductory language. (73 FR 28389) That phrase appears in the current version of 10 CFR 600.6(c) and DOE did not intend to propose that it be removed from the assistance regulation.

DOE intends to include the phrase "or technology investment agreement" in § 600.6(c) of a final rule. Given that neither the removal nor the inclusion of the phrase was mentioned in the May 16 NPR and recognizing that the May 16 version of § 600.6 omitted the phrase "or technology investment agreement" DOE is providing a fifteen day period for interested parties to submit comments. This opportunity to comment is limited to submissions addressing the exclusion or inclusion of the phrase "or technology investment agreement" in a final version of the introductory language of § 600.6(c), as that phrase appears in the current version of 10 CFR 600.6(c).

Issued in Washington, DC on April 24, 2009.

Edward R. Simpson,

Director, Office of Procurement and Assistance Management Department of Energy.

David O. Boyd,

Director, Office of Acquisition and Supply Management, Office of Management, National Nuclear Security Administration.

[FR Doc. E9-10158 Filed 5-1-09; 8:45 am]

BILLING CODE 6450-01-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM398; Notice No. 25-09-01-SC]

Special Conditions: Model C-27J Airplane; Interaction of Systems and Structures

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed special conditions.

SUMMARY: This action proposes special conditions for the Alenia Model C-27J airplane. This airplane has novel or unusual design features when compared to the state of technology described in the airworthiness standards for transport-category airplanes. These design features include electronic flight-control systems. These special conditions pertain to the effects of novel or unusual design features such as effects on the structural performance of the airplane. We have issued additional special conditions for other novel or unusual design features of the C-27J.

The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These proposed special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: We must receive your comments by June 3, 2009.

ADDRESSES: You must mail two copies of your comments to: Federal Aviation Administration, Transport Airplane Directorate, Attn: Rules Docket (ANM-113), Docket No. NM398, 1601 Lind Avenue, SW., Renton, Washington 98057-3356. You may deliver two copies to the Transport Airplane Directorate at the above address. You must mark your comments: Docket No. NM398. You can inspect comments in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4 p.m.

FOR FURTHER INFORMATION CONTACT: Holly Thorson, FAA, International Branch, ANM-116, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue, SW.,

Renton, Washington 98057-3356; telephone (425) 227-1357, facsimile (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite interested people to take part in this rulemaking by sending written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data. We ask that you send us two copies of written comments.

We will file in the docket all comments we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning these special conditions. You can inspect the docket before and after the comment closing date. If you wish to review the docket in person, go to the address in the **ADDRESSES** section of this preamble between 7:30 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

We will consider all comments we receive on or before the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change these special conditions based on the comments we receive.

If you want the FAA to acknowledge receipt of your comments on this proposal, include with your comments a self-addressed, stamped postcard on which the docket number appears. We will stamp the date on the postcard and mail it back to you.

Background

On March 27, 2006, the European Aviation Safety Agency (EASA) forwarded to the FAA an application from Alenia Aeronautica of Torino, Italy, for U.S. type certification of a twin-engine commercial transport designated as the Model C-27J. The C-27J is a twin-turbopropeller, cargo-transport aircraft with a maximum takeoff weight of 30,500 kilograms.

Type Certification Basis

Under the provisions of Section 21.17 of Title 14 Code of Federal Regulation (14 CFR) and the bilateral agreement between the U.S. and Italy, Alenia Aeronautica must show that the C-27J meets the applicable provisions of 14 CFR part 25, as amended by Amendments 25-1 through 25-87. Alenia also elects to comply with Amendment 25-122, effective September 5, 2007, for 14 CFR 25.1317.

If the Administrator finds that existing airworthiness regulations do not adequately or appropriately address

safety standards for the C-27J due to a novel or unusual design feature, we prescribe special conditions under provisions of 14 CFR 21.16.

In addition to the applicable airworthiness regulations and special conditions, the C-27J must comply with the fuel-vent and exhaust-emission requirements of 14 CFR part 34 and the noise-certification requirements of 14 CFR part 36, and the FAA must issue a finding of regulatory adequacy pursuant to § 611 of Public Law 92-574, the "Noise Control Act of 1972."

The FAA issues special conditions, under §§ 11.19 and 11.38, and they become part of the type-certification basis under § 21.17(a)(2).

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same or similar novel or unusual design feature, the special conditions also apply to the other model under § 21.101.

Novel or Unusual Design Features

The C-27J incorporates several novel or unusual design features. Because of rapid improvements in airplane technology, the existing airworthiness regulations do not adequately or appropriately address safety standards for these design features. This proposed special condition for the C-27J contains the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

This special condition was derived initially from standardized requirements developed by the Aviation Rulemaking Advisory Committee (ARAC), comprised of representatives of the FAA, Europe's Joint Aviation Authorities (JAA, now replaced by the European Aviation Safety Agency (EASA)), and industry. From the initial proposal, the JAA proposed this special condition in Notice of Proposed Amendment (NPA) 25C-199. When Ente Nazionale per l'Aviazione Civile (ENAC) certified the C-27J they applied NPA 25C-199, issued July 3, 1997.

Discussion

The Alenia C-27J is equipped with systems that affect the airplane's structural performance, either directly or as a result of failure or malfunction. That is, the airplane's systems affect how it responds in maneuver and gust conditions, and thereby affect its structural capability. These systems may also affect the aeroelastic stability of the airplane. Such systems represent a

novel and unusual feature when compared to the technology described in the current airworthiness standards. A special condition is needed to require consideration of the effects of systems on the structural capability and aeroelastic stability of the airplane, in both the normal and the failed states.

This special condition requires that the airplane meet the structural requirements of subparts C and D of 14 CFR part 25 when the airplane systems are fully operative. The special condition also requires that the airplane meet these requirements taking into consideration failure conditions. In some cases, reduced margins are allowed for failure conditions based on system reliability.

Applicability

As discussed above, these proposed special conditions are applicable to the C-27J. Should Alenia apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design features, these proposed special conditions apply to that model as well under the provisions of Sec. 21.101.

Conclusion

This action affects only certain novel or unusual design features of the Alenia C-27J. It is not a rule of general applicability, and it affects only the applicant that applied to the FAA for approval of these features on the airplane.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702, 44704.

The Proposed Special Conditions

Accordingly, the Administrator of the Federal Aviation Administration (FAA) proposes the following special conditions as part of the type-certification basis for the C-27J.

1. General

(a) The C-27J is equipped with systems that affect the airplane's structural performance either directly or as a result of failure or malfunction. The influence of these systems and their failure conditions must be taken into account when showing compliance with requirements of subparts C and D of part 25 of Title 14 of the Code of Federal Regulations (CFR). The following criteria must be used for showing compliance with this proposed special condition for airplanes equipped with

flight control systems, autopilots, stability-augmentation systems, load-alleviation systems, flutter-control systems, fuel-management systems, and other systems that either directly, or as a result of failure or malfunction, affect structural performance. If this proposed special condition is used for other systems, it may be necessary to adapt the criteria to the specific system.

(b) The criteria defined here address only the direct structural consequences of the system responses and performances, and cannot be considered in isolation, but should be included in the overall safety evaluation of the airplane. These criteria may, in some instances, duplicate standards already established for this evaluation. These criteria are only applicable to structure the failure of which could prevent continued safe flight and landing. Specific criteria that define acceptable limits on handling characteristics or stability requirements, when operating in the system-degraded or inoperative mode, are not provided in this special condition.

(c) Depending upon the specific characteristics of the airplane, additional studies may be required, that go beyond the criteria provided in this special condition, to demonstrate the capability of the airplane to meet other realistic conditions, such as alternative gust or maneuver descriptions, for an airplane equipped with a load-alleviation system.

(d) The following definitions are applicable to this special condition.

Structural performance: Capability of the airplane to meet the structural requirements of 14 CFR part 25.

Flight limitations: Limitations that can be applied to the airplane flight conditions following an in-flight occurrence, and that are included in the flight manual (e.g., speed limitations, avoidance of severe weather conditions, etc.).

Operational limitations: Limitations, including flight limitations, that can be applied to the airplane operating conditions before dispatch (e.g., fuel, payload, and Master Minimum Equipment List limitations).

Probabilistic terms: The probabilistic terms (probable, improbable, extremely improbable) used in this special condition are the same as those used in § 25.1309.

Failure condition: The term “failure condition” here is the same as that used in § 25.1309. However, this appendix applies only to system-failure conditions that affect the structural performance of the airplane (e.g., system-failure conditions that induce loads, change the response of the airplane to variables such as gusts or pilot actions, or reduce flutter margins).

2. Effects of Systems on Structures

(a) **General.** The following criteria determine the influence of a system and its failure conditions on the airplane structure.

(b) **System fully operative.** With the system fully operative, the following apply:

(1) Limit loads must be derived in all normal operating configurations of the system from all the limit conditions specified in Subpart C, taking into account any special behavior of such a system or associated functions, or any effect on the structural performance of the airplane that may occur up to the

limit loads. In particular, any significant nonlinearity (rate of displacement of control surface, thresholds, or any other system nonlinearities) must be accounted for in a realistic or conservative way when deriving limit loads from limit conditions.

(2) The airplane must meet the strength requirements of 14 CFR part 25 (static strength, residual strength) using the specified factors to derive ultimate loads from the limit loads defined above. The effect of nonlinearities must be investigated beyond limit conditions to ensure the behavior of the system presents no anomaly compared to the behavior below limit conditions. However, conditions beyond limit conditions need not be considered when it can be shown that the airplane has design features that will not allow it to exceed those limit conditions.

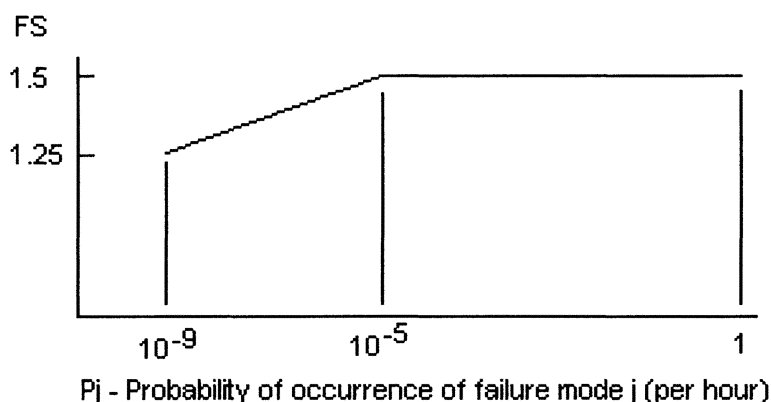
(3) The airplane must meet the aeroelastic-stability requirements of § 25.629.

(c) System in the failure condition. For any system-failure condition not shown to be extremely improbable, the following apply:

(1) At the time of occurrence. Starting from 1-g level-flight conditions, a realistic scenario, including pilot corrective actions, must be established to determine the loads occurring at the time of failure and immediately after failure.

(i) For static-strength substantiation, these loads, multiplied by an appropriate factor of safety that is related to the probability of occurrence of the failure, are ultimate loads to be considered for design. The factor of safety (F.S.) is defined in Figure 1.

Figure 1
Factor of safety at the time of occurrence



(ii) For residual-strength substantiation, the airplane must be able

to withstand two-thirds of the ultimate loads defined in subparagraph (c)(1)(i).

(iii) Freedom from aeroelastic instability must be shown up to the

speeds defined in § 25.629(b)(2). For failure conditions that result in speed increases beyond V_C/M_C , freedom from aeroelastic instability must be shown to increased speeds, so that the margins intended by § 25.629(b)(2) are maintained.

(iv) Failures of the system that result in forced structural vibrations (oscillatory failures) must not produce loads that could result in detrimental deformation of primary structure.

(2) For the continuation of the flight. For the airplane in the system-failed state, and considering any appropriate

reconfiguration and flight limitations, the following apply:

(i) The loads derived from the following conditions at speeds up to V_C/M_C , or the speed limitation prescribed for the remainder of the flight, must be determined:

(A) The limit-symmetrical-maneuvering conditions specified in § 25.331 and in § 25.345.

(B) The limit-gust-and-turbulence conditions specified in § 25.341 and in § 25.345.

(C) The limit-rolling conditions specified in § 25.349, and the limit-

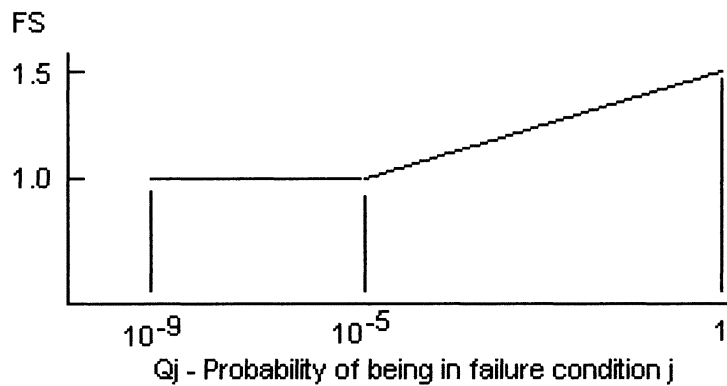
unsymmetrical conditions specified in § 25.367 and § 25.427(b) and (c).

(D) The limit-yaw-maneuvering conditions specified in § 25.351.

(E) The limit-ground-loading conditions specified in § 25.473 and § 25.491.

(ii) For static-strength substantiation, each part of the structure must be able to withstand the loads in subparagraph (2)(i) of this paragraph, multiplied by a factor of safety depending on the probability of being in this failure state. The factor of safety is defined in Figure 2.

Figure 2
Factor of safety for continuation of flight



$$Q_j = (T_j)(P_j)$$

Where:

T_j = Average time spent in failure condition j (in hours)

P_j = Probability of occurrence of failure mode j (per hour)

Note: If P_j is greater than 10^{-3} per flight hour, then a 1.5 factor of safety must be

applied to all limit-load conditions specified in Subpart C.

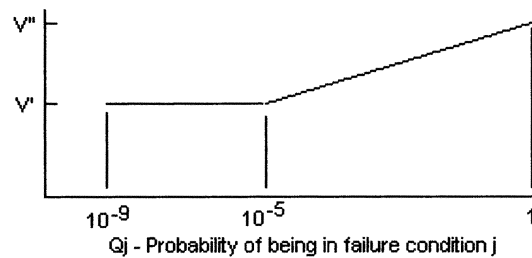
(iii) For residual-strength substantiation, the airplane must be able to withstand two-thirds of the ultimate loads defined in subparagraph (c)(2)(ii).

(iv) If the loads induced by the failure condition have a significant effect on

fatigue or damage tolerance, then their effects must be taken into account.

(v) Freedom from aeroelastic instability must be shown up to a speed determined from Figure 3. Flutter-clearance speeds V' and V'' may be based on the speed limitation specified for the remainder of the flight using the margins defined by § 25.629(b).

Figure 3
Clearance speed



V' = Clearance speed as defined by § 25.629(b)(2).

V'' = Clearance speed as defined by § 25.629(b)(1).

$$Q_j = (T_j)(P_j)$$

Where:

T_j = Average time spent in failure condition j (in hours)

P_j = Probability of occurrence of failure mode j (per hour)

Note: If P_j is greater than 10^{-3} per flight hour, then the flutter clearance speed must not be less than V'' .

(vi) Freedom from aeroelastic instability must also be shown, up to V'

in Figure 3 above, for any probable system-failure condition combined with any damage required or selected for investigation by § 25.571(b).

(3) Consideration of certain failure conditions may be required by other subparts of part 25 regardless of calculated system reliability. Where analysis shows the probability of these failure conditions to be less than 10^{-9} , criteria other than those specified in this paragraph may be used for structural substantiation to show continued safe flight and landing.

(d) *Failure indications.* For system-failure detection and indication, the following apply:

(1) The system must be checked for failure conditions, not extremely improbable, that degrade the structural capability below the level required by part 25, or that significantly reduce the reliability of the remaining system. To the extent practicable, these failures must be detected and annunciated to the flight crew before flight. Certain elements of the control system, such as mechanical and hydraulic components, may use special periodic inspections, and electronic components may use daily checks, in lieu of warning systems, to achieve the objective of this requirement. These certification-maintenance requirements must be limited to components that are not readily detectable by normal warning systems, and where service history shows that inspections provide an adequate level of safety.

(2) The existence of any failure condition, not extremely improbable, during flight, that could significantly affect the structural capability of the airplane and for which the associated reduction in airworthiness can be minimized by suitable flight limitations, must be signaled to the flight crew. Failure conditions that result in a factor of safety between the airplane strength and the loads of Subpart C below 1.25, or flutter margins below V'' , must be signaled to the crew during flight.

(e) *Dispatch with known failure conditions.* If the airplane is to be dispatched in a known system-failure condition that affects structural performance, or affects the reliability of the remaining system to maintain structural performance, then the provisions of § 25.302 must be met for the dispatched condition and for subsequent failures. Flight limitations and expected operational limitations may be taken into account in establishing Q_j as the combined probability of being in the dispatched failure condition and the subsequent failure condition for the safety margins in Figures 2 and 3. These limitations

must be such that the probability of being in this combined failure state, and then subsequently encountering limit-load conditions, is extremely improbable. No reduction in these safety margins is allowed if the subsequent system-failure rate is greater than 10^{-3} per hour.

Issued in Renton, Washington, on December 31, 2008.

Linda Navarro,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E9-10164 Filed 5-1-09; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-27862; Directorate Identifier 2007-CE-036-AD]

RIN 2120-AA64

Airworthiness Directives; Thrus Aircraft, Inc. (Type Certificate Previously Held by Quality Aerospace, Inc. and Ayres Corporation) Model 600 S2D and S2R (S-2R) Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede Airworthiness Directive (AD) 2006-07-15, which applies to Thrus Aircraft, Inc. Model 600 S2D and S2R (S-2R) series airplanes (type certificate previously held by Quality Aerospace, Inc. and Ayres Corporation). AD 2006-07-15 currently requires repetitive inspections of the $\frac{1}{4}$ -inch and $\frac{5}{16}$ -inch bolt hole areas on the wing front lower spar caps for fatigue cracking; replacement or repair any wing front lower spar cap where fatigue cracks are found; and reporting of any fatigue cracks found to the FAA. AD 2006-07-15 also puts the affected airplanes into groups for compliance time and applicability purposes. Since we issued AD 2006-07-15, FAA analysis reveals that inspections are not detecting all existing cracks and shows the incidences of undetected cracks will increase as the airplanes age. Consequently, this proposed AD would retain the actions of AD 2006-07-15 and impose a life limit on the wing front lower spar caps that requires replacement of the wing front lower spar caps when the life limit is reached. This proposed AD would also change

the requirements and applicability of the groups discussed above and remove the ultrasonic inspection method. We are proposing this AD to prevent wing front lower spar cap failure caused by undetected fatigue cracks. Such failure could result in loss of a wing in flight.

DATES: We must receive comments on this proposed AD by July 6, 2009.

ADDRESSES: Use one of the following addresses to comment on this proposed AD:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- *Fax:* (202) 493-2251.

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

- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Thrus Aircraft, Inc., 300 Old Pretoria Road, P.O. Box 3149, Albany, Georgia 31706-3149. The service information is also available on the Internet at www.thrusaircraft.com.

For Further Information, Contact One of the Following:

—Cindy Lorenzen, Aerospace Engineer, ACE-115A, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6078; facsimile: (770) 703-6097; e-mail: cindy.lorenzen@faa.gov; or

—Keith Noles, Aerospace Engineer, ACE-117A, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6085; facsimile: (770) 703-6097; e-mail: gregory.noles@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments regarding this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include the docket number, "FAA-2007-27862; Directorate Identifier 2007-CE-036-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the proposed AD. We will consider all