reserve requirements meeting the capital needs of the property when there is an “ownership transfer or sale”. The change in the regulation only concerns new construction so it does not address the reserve requirements in the case of a subsequent loan, with an ownership transfer or sale and without an ownership transfer of sale. The Agency does not plan on making a change to the regulation in response to this comment at this time.

6. Changing the wording in Section 3560.65. A commenter recommended changing the wording in Section 3560.65, as the analysis is really based upon the CNA or the Life Cycle Cost Analysis, prepared by a consultant or architect hired by the developer, not developed by Rural Development. We would note that the language “Acceptable to Rural Development” still allows for the CNA to be prepared by others but establish Rural Development as the final approval authority. The Agency agrees and will make the change to the regulation.

7. Performing a CNA every 5 years, incurring the cost of the assessment and sharing the information. Two commenters suggested that Rural Development perform a CNA every 5 years. The first of the two commenters suggested, if the cost of updating a CNA every 5 years is prohibitive for a specific project, it may be more appropriate to allow the Rural Development staff and the project management to conduct reviews, with a process for resolving disparities in their recommendations. The second of the two commenters suggested the Rural Development program incur the cost of the assessment and share the information and adjust the reserve requirements accordingly, as rents cannot be raised to an amount that will cover all current and future reserve expenses. Utilizing Rural Development staff and project management to update a CNA is a potentially beneficial practice, and the Agency understands that CNAs can be cost prohibitive. Therefore, a revision as to the regulation has been made to allow for contribution adjustments every 5 or 10 years rather than every 5 years. These updated CNAs must be paid for by the borrower and conducted by a third-party.

8. Basing the reserve account deposits on a CNA or Life Cycle Cost Analysis. A commentator agreed that the Agency should base the reserve account deposits on a CNA or life cycle cost analysis. By doing this, MFH projects would have better project cash flow and improved long term performance which would benefit the low-income families residing in these units and provide sufficient reserves to maintain these projects in the long term, as well as the communities in which these projects are located. There is no need to change the rule for this comment.

List of Subjects in 7 CFR Part 3560

Accounting, Government property management, Grant programs—housing and community development, Insurance, Loan programs—Agriculture, Loan programs—housing and community development, Mortgage.

Therefore, chapter XXXV, Title 7 of the Code of Federal Regulations, is amended as follows:

Part 3560—Direct Multi-Family Housing Loans and Grants

§ 3560.65 Reserve account.

(a) For new construction, to meet major capital expenses of a housing project, applicants must establish and fund a reserve account that meets the requirements of § 3560.306. The applicant must agree to make monthly contributions to the reserve account pursuant to a reserve account analysis which sets forth how the reserve account funds will meet the capital needs of the property over an acceptable 20-year period. The reserve account analysis is based on either a Capital Needs Assessment or life cycle cost analysis, provided and acceptable to Rural Development by the applicant. Adjustments may be made to the contribution amount at 5 or 10-year intervals, either through an updated Capital Needs Assessment or as part of the original life cycle cost analysis. The cost of conducting either a Capital Needs Assessment or life cycle cost analysis will be paid for by the applicant. The cost of the initial Capital Needs Assessment or life cycle cost analysis may be included in the loan financing.

(b) For ownership transfers or sales, the requirements of § 3560.406(d)(5) will be met.

(c) For other existing properties, at a minimum the borrower must agree to make monthly contributions to the reserve account at the rate of 1 percent annually of the amount of total development cost until the reserve account equals 10 percent of the total development cost.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA–2012–0499; Special Conditions No. 25–466–SC]

Special Conditions: Boeing, Model 737–800; Large Non-Structural Glass in the Passenger Compartment

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions.

SUMMARY: These special conditions are issued for the Boeing Model 737–800 airplane. This airplane as modified by Lufthansa Technik will have a novel or unusual design feature associated with the installation of large non-structural glass items in the cabin area of an executive interior occupied by passengers and crew. The installation of these items in a passenger compartment, which can be occupied during taxi, takeoff, and landing, is a novel or unusual design feature with respect to the material used. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These 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: Effective Date: June 25, 2012.


SUPPLEMENTARY INFORMATION:

Background

On December 16, 2010, Lufthansa Technik AG, Weg Beim Jaeger 193, 22335 Hamburg Germany applied for a supplemental type certificate for the installation of large non-structural glass items in the cabin area of the executive interior occupied by passengers and crew in a Boeing Model 737–800. The Boeing Model 737–800, approved under Type Certificate No. A16WE, is a large transport category airplane that is
limited to 189 passengers or less, depending on the interior configuration. This specific Boeing Model 737–800 configuration includes seating provisions for 34 passengers.

Type Certification Basis

Under the provisions of Title 14, Code of the Federal Regulations (14 CFR) 21.101, Lufthansa Technik must show that the Boeing Model 737–800, as changed, continues to meet the applicable provisions of the regulations incorporated by reference in Type Certificate No. A16WE or the applicable regulations in effect on the date of application for the change. The regulations incorporated by reference in the type certificate are commonly referred to as the “original type certification basis.” The regulations incorporated by reference in Type Certificate No. A16WE are as follows: 14 CFR part 25 as amended by Amendments 25–1 through 25–77 with exceptions for the Boeing Model 737–800. In addition, the certification basis includes certain special conditions, exemptions, or later amended sections of the applicable part that are not relevant to these special conditions.

If the Administrator finds that the applicable airworthiness regulations (i.e., 14 CFR part 25) do not contain adequate or appropriate safety standards for the Boeing Model 737–800 because of a novel or unusual design feature, special conditions are prescribed under the provisions of §21.16.

Special conditions are initially applicable to the model for which they are issued. Should the applicant apply for a supplemental type certificate to modify any other model included on the same type certificate to incorporate the same or similar novel or unusual design feature, the special conditions would also apply to the other model under §21.101.

In addition to the applicable airworthiness regulations and special conditions, the Boeing Model 737–800 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.

The FAA issues special conditions, as defined in 14 CFR 11.19, in accordance with §11.38, and they become part of the type-certification basis under §21.101.

Novel or Unusual Design Features

The Boeing Model 737–800 will incorporate the following novel or unusual design features: The installation of large non-structural glass items, typically in the form of glass sheets in the cabin area of an executive interior occupied by passengers and crew.

These installations would be for aesthetic purposes, not for safety, in components other than windshields or windows. For these special conditions, a large glass item is 4 kg (approximately 10 pounds) and greater in mass. This limit was established as the mass at which a glass component could be expected to potentially cause widespread injury if it were to shatter or break free from its retention system.

These special conditions address the novel and unusual design features for the use of large non-structural glass in the passenger cabin. These large glass items would be installed in occupied rooms or areas during taxi, take off, and landing, or rooms or areas that occupants do have to enter or pass through to get to any emergency exit. The installations of large non-structural glass items may include, but are not limited to, the following items:
- Glass partitions.
- Glass attached to the ceiling.
- Wall/door mounted mirrors/glass panels.

Discussion

The existing part 25 regulations only address the use of glass in windshields, instrument or display transparencies, or window applications. The regulations treat glass as unique for special applications where no other material will serve and address the adverse properties of glass.

Section 25.775, “Window and windshields,” provides for the use of glass in airplanes but limits glass to windshields and windows. Furthermore, except for bolted-in windshields, there is limited experience with either adhesive or mechanical retention methods for large glass objects installed in an airplane subject to high loads supported by flexible restraints.

The FAA has accepted the following uses of glass in the passenger cabin under the current regulations:
1. Glass items installed in rooms or areas in the cabin that are not occupied during taxi, take off, and landing, and occupants do not have to enter or pass through the room or area to get to any emergency exit.
2. Glass items integrated into a functional device whose operation is dependent upon the characteristics of glass, such as instrument or indicator protective transparencies, or monitor screens such as liquid crystal display (LCD) or plasma displays. These glass items may be installed in any area in the cabin, regardless of occupancy during taxi, take-off, and landing. Acceptable means for these items may depend on the size and specific location of the device.
3. Small glass items installed in occupied rooms or areas during taxi, take off, and landing, or rooms or areas that occupants do have to enter or pass through to get to any emergency exit. For the purposes of these special conditions, a small glass item is less than 4 kg in mass or a group of glass items weighing less than 4 kg in mass.

The glass items in numbers one, two, and three (above) have been restricted to applications where the potential for injury is either highly localized (such as instrument faces) or the location is such that injury due to failure of the glass is unlikely (e.g., mirrors in lavatories). These glass items are subject to the inertia loads contained in §25.561 and maximum positive differential pressure for items like monitors, but are not subject to these special conditions. They have been found acceptable through project specific means of compliance requiring testing to meet the requirement in §25.785(d) and by adding a protective polycarbonate layer that covers the glass exposed to the cabin.

The use of glass in airplanes utilizes the one unique characteristic of glass—its capability for undistorted or controlled light transmittance, or transparency. Glass, in its basic form as annealed, untreated sheet, plate, or float glass, when compared to metals, is extremely notch-sensitive, has a low fracture resistance, has a low modulus of elasticity, and can be highly variable in its properties. While reasonably strong, it is not a desirable material for traditional aircraft applications because, as a solo component, it is heavy (about the same density as aluminum). In addition, when glass fails, it can break into extremely sharp fragments that have the potential for injury above and beyond simple impact and have been known to be lethal.

The proposed special conditions address installing glass in much larger sizes than previously accepted and in a multitude of locations and applications, instead of using more traditional aircraft materials. In most, if not all cases, the glass will not be covered with a polycarbonate layer. Additionally, the retention of glass of this size and weight is not amenable to conventional techniques currently utilized in airplane cabins.

The proposed special conditions consider the unusual material properties of glass as an interior material that have limited or prevented its use in the past, and address the performance standards needed to ensure that those properties do not reduce the level of safety.
intended by the regulations. They address the use of large glass items installed in occupied rooms or areas during taxi, take off, and landing, or rooms or areas that occupants do have to enter or pass through to get to any emergency exit.

The special conditions define a large glass component threshold of 4 kg, which is based on an assessment of the mass dislodged during a high “g” level (as defined in §25.562) event. Groupings of glass components that total more than 4 kg would also need to be included. The applicable performance standards in the regulations for the installation of these components also apply and should not adversely affect the standards provided below. For example, heat release and smoke density testing should not result in fragmentation of the component.

For large glass components mounted in a cabin occupied by passengers or crew that are not otherwise protected from the injurious effects of failure of the glass component, the following apply:

**Material**. The glass used must be tempered or otherwise treated to ensure that when fractured, it breaks into small pieces with relatively dull edges. This must be demonstrated by testing to failure. Tests similar to ANSI/SAE Z26.1 section 5.7, Test 7 would be acceptable.

**Fragmentation**. The glass component construction must control the fragmentation of the glass to minimize the danger from flying glass shards or pieces. Impact and puncture testing to failure must demonstrate this. Tests similar to ANSI/SAE Z26.1 section 5.9, Test 9 adjusted to ensure cracking the glass would be acceptable.

**Strength**. The glass component, as installed in the airplane, must be strong enough to meet the load requirements for all flight and landing loads and all of the emergency landing conditions in subparts C and D of part 25. In addition, glass components that are located such that they are not protected from contact with cabin occupants must be designed for abusive loading without failure, such as impact from service carts, or occupants stumbling into, leaning against, sitting on, or performing other intentional or unintentional forceful contact. This must be demonstrated by static structural testing to ultimate load except that the critical loading condition must be tested to failure. The tested glass component must have all features that affect component strength, such as etched surfaces, cut or engraved designs, holes, and so forth.

**Retention**. The glass component, as installed in the airplane, must not come free of its restraint or mounting system in the event of an emergency landing. Based on the characteristics of a large glass component, dynamic tests should be performed to demonstrate that the occupants would be protected up to the load levels required by the certification basis of the airplane. A single test for the most critical loading for the installed component would be sufficient. This may be accomplished by using already accepted methods for dynamic testing.

Analysis may be used in lieu of testing if the applicant has validated the strength models and dynamic simulation models used against static tests to failure and dynamic testing to the above requirements and can predict structural failure and dynamic response and inertial load. The glass material properties must meet §25.613, “Material strength properties and material design values.” The effect of design details, such as geometric discontinuities or surface finish, must be accounted for in the test/analysis.

**Discussion of Comments**

Notice of proposed special conditions No. 25–12–01–SC for the Boeing Model 737–800 airplane was published in the Federal Register on May 15, 2012 (77 FR 28533). No comments were received, and the special conditions are adopted as proposed.

**Applicability**

As discussed above, these special conditions are applicable to the Boeing Model 737–800. Should Lufthansa Technik apply at a later date for a supplemental type certificate to modify any other model included on Type Certificate No. A16WE to incorporate the same novel or unusual design feature, the special conditions would apply to that model as well.

Under standard practice, the effective date of final special conditions would be 30 days after the date of publication in the Federal Register; however, as the date for the approval of the supplemental type certificate for the Boeing Model 737–800 is imminent, the FAA finds that good cause exists to make these special conditions effective upon issuance.

**Conclusion**

This action affects only certain novel or unusual design features on one model of airplane. It is not a rule of general applicability, and it affects only the application 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 Special Conditions**

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for Boeing Model 737–800 airplanes modified by Lufthansa Technik AG. For these special conditions, a large glass component is 4 kg (approximately 10 pounds) and greater in mass, or a grouping of glass components that total more than 4 kg.

1. Boeing Model 737–800 Airplane; Large Non-Structural Glass in the Passenger Compartment.

The airplane must not be operated for hire or offered for common carriage. This provision does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR parts 125 and 91, subpart F, as applicable.

2. Material Fragmentation. The glass used to fabricate the component must be tempered or treated to ensure that, when fractured, it breaks into small pieces with relatively dull edges. In addition, it must be shown that fragmentation of the glass is controlled to reduce the danger from flying glass shards or pieces. This must be demonstrated by testing to failure.

3. Component Strength. The glass component must be strong enough to meet the load requirements for all flight and landing loads including any of the applicable emergency landing conditions in subparts C and D of part 25. Abuse loading without failure, such as impact from occupants stumbling into, leaning against, sitting on, or performing other intentional or unintentional forceful contact, must also be demonstrated. This must be demonstrated by static structural testing to ultimate load, except that the critical loading condition must be tested to failure in the as-installed condition. The tested glass must have all features that affect component strength, such as etched surfaces, cut or engraved designs, holes, and so forth. Glass pieces must be non-hazardous.

4. Component Retention. The glass component, as installed in the airplane, must not come free of its restraint or mounting system in the event of an emergency landing. A test must be performed to demonstrate that the occupants would be protected from the effects of the component failing or...
In this rule, the Bureau of Industry and Security (BIS) amended the EAR in a final rule on June 19, 2007 (72 FR 33646), creating a new authorization for “Validated end-users” (VEUs) located in eligible destinations to which eligible items may be exported, reexported, or transferred (in-country) under a general authorization instead of a license, in conformance with section 748.15 of the EAR. VEUs may obtain eligible items that are on the Commerce Control List, set forth in Supplement No. 1 to Part 774 of the EAR, without having to wait for their suppliers to obtain export licenses from BIS. Eligible items may include commodities, software, and technology, except those controlled for missile technology or crime control reasons.

The VEUs listed in Supplement No. 7 to Part 748 of the EAR were reviewed and approved by the U.S. Government in accordance with the provisions of section 748.15 and Supplement Nos. 8 and 9 to Part 748 of the EAR. The revisions to Supplement No. 7 to Part 748 set forth in this rule are being made either at the request of the VEUs or pursuant to the U.S. Government’s periodic review of VEU authorizations, and were approved by the End-User Review Committee (ERC) following the process set forth in Section 748.15 and Supplement No. 9 to Part 748 of the EAR.

**Amendment to Existing Validated End-User Authorizations in the PRC**

Revision to Names of Hynix Semiconductor China Ltd. and Hynix Semiconductor (Wuxi) Ltd. and Their “Eligible destinations”

In this rule, BIS amended Supplement No. 7 to Part 748 of the EAR to change the names of existing VEUs Hynix Semiconductor China Ltd. and Hynix Semiconductor (Wuxi) Ltd. and the names of the companies’ respective “Eligible destinations” (i.e., facilities) in the People’s Republic of China (PRC). Both companies were designated as VEUs on October 12, 2010 (75 FR 62462).

In this rule, the name Hynix Semiconductor China Ltd. is changed to SK hynix Semiconductor (China) Ltd., and the name of the company’s existing approved “Eligible destination” is changed from Hynix Semiconductor China Ltd. to SK hynix Semiconductor (China) Ltd. In addition, the name Hynix Semiconductor (Wuxi) Ltd. is changed to SK hynix Semiconductor (Wuxi) Ltd., and the name of the company’s existing approved “Eligible destination” is changed from Hynix Semiconductor (Wuxi) Ltd. to SK hynix Semiconductor (Wuxi) Ltd. The addresses of the companies’ respective “Eligible destinations” remain the same. These amendments are prompted by factors arising from the companies’ normal course of business, and are not the result of activities of concern by the companies.

**Revision to the List of “Eligible items (by ECCN)” for Boeing Tianjin Composites Co. Ltd.**

BIS designated BHA Aero Composite Parts Co. as a VEU on October 19, 2007 (72 FR 59164). On April 29, 2009, BIS amended the authorization by changing the name of the VEU to Boeing Tianjin Composites Co., Ltd. (BTC) (74 FR 19382). In addition, on February 24, 2012, BIS amended BTC’s VEU authorization to correct the address of BTC’s eligible destination and revise the list of “Eligible items (by ECCN)” that may be exported, reexported, and transferred (in-country) to BTC (77 FR 10953). In this rule, BIS further revises the list of “Eligible items (by ECCN)” that may be exported, reexported, and transferred (in-country) to BTC. This amendment is prompted by factors arising from BTC’s normal course of business, and is not the result of activities of concern by BTC.

BTC’s list of “Eligible items (by ECCN)” prior to the publication of this rule was:

- 1A002.a, 1B001.f, 1C010.b, 1C010.e, 1D001 (limited to “software” specially designed or modified for the “development”, “production” or “use” of equipment controlled by 1B001.f), 1E001 (limited to “technology” according to the General Technology Note for the “development” or “production” of items controlled by 1A002.a, 1B001.f and 1C010.b & .e), 2B001.b.2 (limited to machine tools with accuracies no better than (i.e., less than) 13 microns),