4-187 OVERVIEW. The general process of approval or acceptance of certain operations, programs, documents, procedures, methods, or systems is an orderly method used by Flight Standards Service (AFS) inspectors to ensure that such items meet regulatory standards and provide for safe operating practices. It is a modular, generic process that is ideally suited for the approval of Special Authorization (SA) Category I (CAT I) and Category II/III (CAT II/III) (including SA CAT II) programs that are solicited by operators from the Federal Aviation Administration (FAA). The process consists of five distinct, yet related, phases and can result in approving or not approving an operator’s CAT II and/or CAT III application. It is important for an inspector to understand that the process described in this section is not all-inclusive, but is rather a tool to be used with good judgment in conducting day-to-day duties and responsibilities. A flow diagram of the process is found in Figure 4-4, Category II/III Evaluation and Approval Process Flow Diagram for Parts 91, 91K, and 125. Title 14 of the Code of Federal Regulations (14 CFR) parts 121 and 135 operators have traditionally been the industry leaders of low visibility innovations and equipage. As such, these operators have been the focus of the FAA’s low visibility approval process. In recent years, the business jet community has gained parity with the airlines in terms of equipage, and their fleet size rivals that of major airlines. The FAA applies the same approval process for 14 CFR parts 91 subpart K (part 91K), 125, and large part 91 aircraft operators as for parts 121 and 135.

4-188 APPLICABILITY. The purpose of this task is to provide operational system safety oversight, analysis, and guidance to principal inspectors (PI) and All Weather Operations Specialists (AWOS) on the authorization of operators to conduct instrument landing system (ILS) approach operations. The principal operations inspector (POI) authorizes the SA CAT I and all CAT II/III operations via the issuance of an operations specification (OpSpec), management specification (MSpec), or letter of authorization (LOA). Additionally, ILS CAT II and III approval requires concurrence of the regional Flight Standards division (RFSD). The Regional Next Generation (NextGen) Branch (RNGB) (AXX-220) is the point of contact (POC) for CAT II/III operator approval. The process in this section applies to U.S. operators conducting operations under part 91 (large aircraft), 91K, 121, 125, or 135 who pursue FAA SA CAT I and CAT II/III operational approval. For rotorcraft, CAT II authorization in accordance with this section also permits Copter ILS operations to a decision height (DH) of less than 200 feet.

A. Part 129 CAT II/III Authorization. The appropriate International Field Office (IFO)/International Field Unit (IFU) is responsible for authorizing 14 CFR part 129 foreign air carriers for CAT II/III operations, which is based primarily on a CAT II/III authorization from the State of Operator. Volume 4, Chapter 2, Section 8 contains an overview of guidance on how to authorize a part 129 foreign air carrier to conduct SA CAT I and CAT II/III operations. SA CAT I and CAT II/III authorizations for foreign air carriers are completed in accordance with guidance found in Volume 12, Chapter 2, Section 5.
B. Small Category A Aircraft Authorization. Volume 4, Chapter 2, Section 3 contains the CAT II approval process for small (less than 12,500 pounds) Category A aircraft, including small Category A airplanes and rotorcraft operating under the deviation authority prescribed in part 91, § 91.193.

4-189 REPORTING SYSTEM(S).

A. Safety Assurance System (SAS). For parts 121 and 135, POIs shall utilize SAS Data Collection Tools (DCT) 2.2.2 (OP), Category II & III Operations, and 2.3.1 (OP), Appropriate Operation Equipment.

B. Program Tracking and Reporting Subsystem (PTRS). For parts 91, 91K, and 125, use PTRS activity codes. POIs shall make a PTRS entry to record the actions directed by this section. The PTRS entry shall be listed according to the applicable phase as annotated below. POIs should use the comments section to record comments about interaction with the operators. The applicable PTRS codes for this task are as follows:

- Category II/III ILS Operations (OPS) Phase I Approval for an Operator: 1430.
- Category II/III ILS OPS Phase II Approval for an Operator: 1431.
- Category II/III ILS OPS Phase III Approval for an Operator: 1432.
- Category II/III ILS OPS Phase IV Approval for an Operator: 1433.
- Category II/III ILS OPS Phase V Approval for an Operator: 1434.

4-190 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of National Airspace System (NAS) operational requirements; knowledge of FAA certification rules, policies, and operational system requirements; knowledge of reduced visibility flight operations, aircraft systems, and certification requirements; skill in applying system safety principles; and the ability to link local issues with the broader regional, national, and international concerns.

B. Coordination. This task requires coordination between the POI, principal maintenance inspector (PMI), principal avionics inspector (PAI), and RNGB (AXX-220), and may also require coordination with the operator, training vendors, and aircraft/avionics manufacturers.

4-191 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 49 of the United States Code (49 U.S.C.) §§ 40101(a), 40103(e), 40113(a), 41101(a), (b), and (c), 41102, 41103(b)(2), 41701, 41702, 44505(a)(1)(A) and (B), 44702(f)(4), 44709(a), 44721, 46105(a), and 46106.
- Title 14 CFR Parts 91, 97, 119, 121, 125, 129, and 135.
- FAA Order 6560.10, Runway Visual Range (RVR).

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• FAA Order 6750.24, Instrument Landing System and Ancillary Electronic Component Configuration and Performance Requirements.
• FAA Order JO 7110.65, Air Traffic Control.
• FAA Order 8260.49, Simultaneous Offset Instrument Approach (SOIA).
• AC 97-1, Runway Visual Range (RVR).
• AC 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout.
• AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach.
• AC 120-57, Surface Movement Guidance and Control System.
• AC 120-71, Standard Operating Procedures for Flight Deck Crewmembers.
• Technical Standard Orders (TSO).
• U.S. Flight Information Publications (FLIP).
• Aeronautical Information Manual (AIM).

B. Forms and Job Aids for Parts 91, 91K, and 125 Operations.

• Figure 4-5, Category II/III Approval Job Aid (Operations) for Parts 91, 91K, and 125; and
• Figure 4-6, Category II/III Approval Job Aid (Avionics/Maintenance) for Parts 91, 91K, and 125.

NOTE: Figure 4-5 is a blank CAT II/III Operations job aid, and Figure 4-6 is a blank CAT II/III Airworthiness job aid. A partial example of a completed CAT II/III Operations job aid is included in Figure 4-7, Example of Completed Flight Operations Job Aid for Parts 91, 91K, and 125. For the most recent version of both the Operations and Airworthiness job aids, see the Flight Operations Branch (AFS-410) Web site at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/avs/afs/afs400/afs410/policy_guidance/.

C. For Parts 121 and 135 Operations. Utilize SAS DCTs 2.2.2 (OP), Category II & III Operations, and 2.3.1(OP), Appropriate Operation Equipment.

4-192 DEFINITIONS.

A. CAT II Runway Visual Range (RVR) 1000. Order 8400.13 authorizes CAT II approaches with a DH as low as 100 feet and visibility minimums of RVR 1000 to runways that meet all CAT II equipment, performance, and lighting requirements. The operator must use either autoland or Head Up Display (HUD) authorized to touchdown.
B. **CAT III Operations.** CAT III operations are separated into three subcategories: CAT IIIa, CAT IIIb, and CAT IIIc.

1) **Category IIIa Operations.** CAT IIIa is an approach and landing operation with an RVR of not less than 700 feet (200 meters) without a DH, or with a DH of less than 100 feet (30 meters), or an alert height (AH) that is typically between 50 and 200 feet, depending on aircraft certification and operator preferences. Both fail passive (FP) and fail operational (FO) airborne equipment can be used in CAT IIIa operations.

2) **Category IIIb Operations.** CAT IIIb is an approach and landing operation with an RVR of less than 700 feet (200 meters), but not less than 150 feet (50 meters), and a DH of 50 feet (15 meters) or less, or an AH that is typically between 50 and 200 feet, depending on aircraft certification and operator preferences. Both FP and FO airborne equipment can be used for CAT IIIb operations.

3) **Category IIIc Operations.** CAT IIIc is an approach and operation landing without a DH and without RVR limitations (zero-zero). CAT IIIc operations are currently not authorized.

C. **SA CAT I.** Order 8400.13 authorizes SA CAT I approaches to a radio altimeter (RA) DH as low as 150 feet and a visibility minimum as low as RVR 1400 to runways that do not have touchdown zone (TDZ) or runway centerline (RCL) lighting when the approach is flown using an aircraft with a HUD to DH.

NOTE: To be approved for SA CAT I, each airplane and HUD must be authorized and maintained for CAT II or CAT III operations.

D. **SA CAT II.** FAA Order 8400.13 authorizes CAT II approaches with a DH as low as 100 feet and visibility minimums of RVR 1200 at runways that do not meet all of the lighting requirements (Approach Lighting System With Sequenced Flashing Lights (ALSF)-2, TDZ, RCL lights) for standard CAT II. The operator must use either autoland or HUD authorized to touchdown.

E. **Standard CAT II Operations.** CAT II operations are approach and landing operations conducted with a DH of less than 200 feet (60 meters), but not less than 100 feet, (30 meters), and an RVR of not less than 1200 feet (350 meters).

NOTE: For rotorcraft, CAT II authorization in accordance with this section also permits Copter ILS operations to a DH of less than 200 feet.

4-193 OPERATOR AUTHORIZATION—SA CAT I, SA CAT II, CAT II RVR 1000.

A. **Inspector Procedures.** The purpose of this task is for the POI to authorize issuance of the appropriate OpSpec/MSpec/LOA (or a letter disapproving the request for the OpSpec) for operators to conduct ILS SA CAT I, SA CAT II, and CAT II RVR 1000 operations.

B. **SA CAT I.** To conduct SA CAT I operations, the operator must be authorized for either CAT II or III operations using an approved CAT II or III HUD to DH. The SA CAT I
authorization is contained in selectable text in OpSpec/MSpec/LOA C052 for parts 91K, 121, 125, 129, and 135 operators, and in OpSpec/MSpec/LOA C059 for part 91 operators. Guidance on authorizing C052 and C059 is contained in Volume 3, Chapter 18, Section 5, and in Volume 12, Chapter 2, Section 5 for part 129.

1) If the operator is not approved for CAT II or III operations using an approved CAT II or III HUD, then the operator must first complete the CAT II/III approval process, which begins in paragraph 4-194, CAT II/III ILS Operator Authorization Process. The operator is eligible for SA CAT I when RVR 1200 minimums using an approved HUD to DH or touchdown are authorized through the CAT II/III approval process.

2) If the operator is already approved for CAT II or III operations using an approved CAT II or III HUD, completion of the CAT II/III approval process is not required for SA CAT I.

C. SA CAT II. To conduct SA CAT II operations, the operator must be authorized for either CAT II or III operations using autoland or an approved HUD that provides guidance to touchdown. SA CAT II authorization is contained in selectable text in OpSpec/MSpec/LOA C059 for parts 91, 91K, 121, 125, 129, and 135 operators. Guidance on authorizing C059 is contained in Volume 3, Chapter 18, Section 5, and in Volume 12, Chapter 2, Section 5 for part 129.

1) If the operator is not approved for CAT II or III operations using autoland or an approved HUD that provides guidance to touchdown, then the operator must first complete the CAT II/III approval process, which begins in paragraph 4-194, CAT II/III ILS Operator Authorization Process. The operator is eligible for SA CAT II when RVR 1200 minimums using autoland or an approved HUD that provides guidance to touchdown are authorized through the CAT II/III approval process.

2) If the operator is approved for CAT II or III operations using autoland or an approved HUD that provides guidance to touchdown, completion of the CAT II/III approval process is not required for SA CAT II.

D. CAT II—RVR 1000. To conduct CAT II RVR 1000 operations, the operator must be authorized for either CAT II or III operations using autoland or an approved HUD that provides guidance to touchdown. CAT II RVR 1000 authorization is contained in selectable text in OpSpec/MSpec/LOA C059 for parts 91, 91K, 121, 125, 129, and 135 operators. Guidance on authorizing C059 is contained in Volume 3, Chapter 18, Section 5, and in Volume 12, Chapter 2, Section 5 for part 129.

1) If the operator is not approved for CAT II or III operations using autoland or an approved HUD that provides guidance to touchdown, then the operator must first complete the CAT II/III approval process, which begins in paragraph 4-194, CAT II/III ILS Operator Authorization Process. The operator is eligible for CAT II RVR 1000 when RVR 1200 minimums using autoland or an approved HUD that provides guidance to touchdown are authorized through the CAT II/III approval process.
2) If the operator is approved for CAT II or III operations using autoland or an approved HUD that provides guidance to touchdown, completion of the CAT II/III approval process is not required for CAT II RVR 1000.

4-194 CAT II/III ILS OPERATOR AUTHORIZATION PROCESS.

A. Inspector Procedures. The purpose of this task is for the POI to authorize issuance of the appropriate OpSpec/MSpec/LOA (or a letter disapproving the application for the OpSpec) for operators to conduct CAT II and/or CAT III operations (after concurrence from the RFSD).

1) The principal POCs for the operator are the POI, PMI, and PAI. Any errors or corrections discovered during the evaluation (by the AWOS, for example) must be channeled through those PIs back to the applicant. This process will ensure consistency and continuity.

2) This task requires timely issuance of a CAT II/III OpSpec/MSpec/LOA, as applicable, or disapproval of the operator’s application.

NOTE: For rotorcraft, CAT II authorization in accordance with this section also permits Copter ILS operations to a DH of less than 200 feet.

B. Five-Phase Process. The CAT II/III operator authorization process consists of five distinct phases and is initiated by an operator’s initial inquiry. Figure 4-4 shows a flow chart with a summary of the five-phase process.

C. Initial Inquiry (Phase One).

1) Upon initial inquiry, determine the type of operation proposed by the applicant in accordance with Figure 4-4.

2) See paragraph 4-193, Operator Authorization—SA CAT I, SA CAT II, CAT II RVR 1000, and Table 4-5, Special Authorization Category I, Special Authorization Category II, and Category II RVR 1000 Authorization, if the operator wants to add SA CAT I, SA CAT II, and/or CAT II RVR 1000 authorizations as part of the CAT II/III approval process.

3) Advise the applicant to submit a Letter of Intent (LOI) (see Figure 4-8, Sample Letter of Intent to Conduct Category II or III Operations). The LOI should be submitted before the formal application so that the FAA can dedicate appropriate resources for the evaluation of the application. Once the LOI is received, the POI should notify the RNGB (AXX-220), which will assign an AWOS.

4) Inform the applicant that AC 120-29 (for CAT II applicants) and AC 120-28 (for CAT III applicants) are available at http://rgl.faa.gov.

5) Advise the applicant that there is only one acceptable means for demonstrating that the airborne equipment is Airworthy for CAT II or III operations. This means of approval is CAT II or III type design approval, which is normally reflected in the FAA-approved Aircraft Flight Manual (AFM). Inspectors shall not approve CAT II or III operations with any aircraft for any operator unless the operator presents written evidence of CAT II or III type design approval.
for the particular aircraft. Operators seeking CAT II or III type design approval should contact any Aircraft Certification Office (ACO) (see Figure 4-9, Sample Letter from the Operator to the Aircraft Certification Office). The ACO will then forward the request to the appropriate certification directorate for prioritization. If necessary, the certification directorate or the Aircraft Evaluation Group (AEG) will stipulate operational limitations associated with their determination.

6) A list of ACOs may be found at http://www.faa.gov/about/office_org/field_offices/aco/.

7) Inform the applicant that a copy of the latest versions of CAT II/III job aids and other useful information can be found on the AFS-410 Web site at http://www.FAA.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410/policy_guidance/. Explain the job aid to the applicant with particular emphasis on what the contents of the application include, what a compliance statement consists of (see subparagraph D3)), and what the Operator Use Suitability Demonstration (OUSD) entails (see subparagraph F2)). Advise the applicant that the application package should be distinctly divided into an Airworthiness section and an Operations section for evaluation purposes.

8) Advise the applicant of the importance of committing resources in developing the application package and that, even if a perfect package is submitted, the minimum timeline requirement (after package approval) will be in accordance with Table 4-5A, Summary of Category II/III Approval Requirements, which includes the relevant timeframes for each required OUSD stage, based on the operator’s experience and the level of authorization sought.

NOTE: The timeline may be significantly compressed for operators with CAT II/III authorization in the same model but different series of aircraft with minimal differences between flight guidance systems, landing systems, and avionics systems.

9) Advise the applicant to name the company’s central POC, and provide telephone and fax contact numbers as early as possible.

10) Review with the applicant the requirements for preparing a compliance statement, as identified in subparagraph D3).

11) Make appropriate PTRS entries. Note the date that the LOI (if applicable) was sent for review.

D. Receipt of Application (Phase Two).

1) Upon receipt of the formal application and compliance statement, the first task is to inventory the contents of the package by referencing the respective Operations and Airworthiness job aids sections titled “Operator’s Document Application Package.” If any of the documentation is missing or appears incomplete, the evaluation process may begin on the remaining documents.
2) Timely notification to the operator on the documents that are missing or that are incomplete should be made as soon as practical.

3) A compliance statement shall be prepared by every operator, regardless of previous experience, when introducing low visibility operations with a new make, model, and series (M/M/S) to their fleet. A compliance statement is not required when an operator is authorized CAT II/III in the same model but different series of aircraft with minimal differences between flight guidance systems, landing systems, and avionics systems. In these situations, the operator should complete the job aid to facilitate the PI’s review.

   a) Preparation of the compliance statement benefits the applicant by systematically ensuring that all applicable areas are appropriately addressed during the evaluation process. The compliance statement shall be in the form of a complete listing of all AC (AC 120-29 and/or AC 120-28) sections.

   b) Next to each listing, the applicant must provide a specific reference to a manual or other document in the application package and may provide a brief narrative description that describes how the applicant will comply with each section. Those sections that do not apply to the type of operation being requested should be annotated in the compliance statement as “N/A.” The compliance statement also serves as a master index to the applicant’s manual system to expedite the FAA’s review and approval of the operation and manual system. The compliance statement is an important source document during the evaluation process.

   c) After the evaluation process is completed, the compliance statement should be kept current as changes are incorporated in the applicant’s system. Compliance statements should be prepared as a two-volume application. Volume I should contain the AC reference by section (e.g., AC 120-29, paragraph 6.1.8) and provide the location in the operator’s source document (e.g., AFM, section 2.4, page 36). Volume II should contain all the relevant operator documents pertaining to the operator’s application package.

   d) Examples of the compliance statement format are provided in Figure 4-10, Compliance Statement Examples.

E. Evaluating the Formal Application Package (Phase Three).

   1) Begin the evaluation of the applicant’s package by entering the operator’s name and applicable 14 CFR type of operation on the job aid.

   2) Then, following the job aid line by line, enter the appropriate page or section from the operator’s documents into the “Operator’s Reference Document” column. Note that the job aid has linked references to ACs, regulations, and orders that will provide additional guidance during the conduct of the evaluation. Figure 4-7 is a representative section of the Flight Operations Job Aid illustrating how entries are made by the reviewing inspector.

   3) While the job aids provide a systematic, standardized approach to conducting the evaluation, they do not provide sufficient depth and scope to capture areas that are identified as needing additional work. These areas may be complex and need further clarification or may be as simple as typographical errors that require correction.
4) The inspector should initiate and maintain a separate comment document list of findings while conducting the evaluation. Figure 4-11, Comment Document List: Example, is an example of what such a list may look like and illustrates the depth and scope of what the evaluation should include.

5) During the evaluation, if any documents or other relevant parts of the application require correction, are missing, or are incomplete, the applicant should be notified immediately. Normally, documents should not be returned to the applicant unless so requested. This facilitates the ability to compare newly revised material with its earlier version. A log should be kept by the reviewing inspector to maintain a historical record of telephone conversations, emails, or other forms of correspondence that occur during the evaluation period. However, if the majority of the application package is deemed to be unacceptable to the inspector, it should be returned with a letter of disapproval (see Figure 4-12, Sample Letter of Disapproval of a Special Authorization Category I or Category II/III Application).

6) The operator’s approved training and qualification program (CAT II/III pilot training program) must provide the flightcrews with the CAT II/III skills, knowledge, proficiency, and qualification necessary to safely conduct CAT II/III operations. The use of the stabilized approach concept is mandatory for all CAT II/III operations. It is national policy and direction that all operators should be encouraged to use the Standard Instrument Approach Procedures (SIAP) for all CAT II/III operations. The training and qualification curriculum changes necessary for CAT II/III operations are directly related to the need for increased precision in flightpath control due to the reduced seeing-conditions encountered in these operations.

   a) The CAT II/III ground training curriculum segments must include the following:

   • Required ground-based visual aids,
   • Required ground-based electronic aids,
   • Required airborne equipment,
   • Authorized minimums,
   • Controlling RVR requirements,
   • Limitations and use of RVR information,
   • CAT III critical areas and the critical need to protect these areas,
   • Required crew duties and responsibilities,
   • Seeing conditions associated with the transition from instrument to visual flight,
   • Essential nature of maintaining a full-time instrument reference by one pilot throughout the approach and landing,
   • Critical nature of proper eye reference position (proper sitting height),
   • Required pilot training and qualifications,
   • Methods for determining that the aircraft is Airworthy for CAT II/III operations, and
   • Dispatch/flight release requirements.
b) The flight training requirements depend on the equipment installed (autopilot, autoland, or HUD), the operating procedures used, and the kinds of CAT II/III operations authorized (such as FP or FO). The primary objective of the flight training is to ensure that the flightcrew has the skills, knowledge, proficiency, and qualifications necessary to meet the operational concepts and criteria for CAT II/III operations. The flightcrews must also be able to demonstrate in flight, or through an acceptable simulation, the competence necessary to safely conduct these operations. To satisfactorily demonstrate competence, the pilot must successfully accomplish the required maneuvers in accordance with the policies, criteria, procedures, and crew duties specified in this order, AC 120-28, AC 120-29, and the specific operator’s operating manuals and approved qualification program. The CAT II/III flight training curriculum segment must include sufficient flight training to permit pilots to acquire the knowledge and develop the skills and abilities necessary to demonstrate competence in the following areas (refer to AC 120-28 and AC 120-29 for additional guidance):

- Determination of DH and/or AH, including the use of RAs and, if appropriate, the inner markers;
- Recognition of, and proper reaction to, significant CAT II/III system failures before passing the DH or AH, as appropriate;
- Proper missed approach techniques and the expected height loss as it relates to manual or automatic go-around and the go-around initiation altitude;
- The use and limitations of RVR information, including determination of controlling RVR and the number and locations of the RVR reporting systems required;
- The availability and limitations of external visual cues during the latter stages of the approach, flare, and landing;
- Proper procedures to be used for unexpected visibility deterioration (to less than the authorized RVR) during approach, flare, and rollout;
- Achieving the proper eye reference position (proper sitting height) and the expected external visual references with the weather at authorized minimums;
- The appearance and expected sequence of visual cues during approaches and landings at the authorized minimums;
- The effects of wind shear (in CAT II/III weather conditions) on system performance, the proper procedures to be used in these wind shear encounters, and the wind limitations for these operations;
- The proper procedures for transitioning from instrument to visual flight;
- Recognition of the limits of acceptable aircraft position and flightpath tracking in the approach, flare, and landing with special emphasis on tracking performance in the decision region; and
- Recognition of, and reaction to, significant airborne or ground system faults or abnormalities during the approach, flare, and landing.

c) Each pilot in command (PIC) and second in command (SIC) used in CAT II/III operations must satisfactorily demonstrate the ability to safely conduct CAT II/III operations to either a company check pilot or an FAA inspector during initial and recurrent operations.
CAT II/III qualification. The events and/or maneuvers that must be demonstrated depend on the airborne equipment installed, the kinds of CAT II/III operations authorized, and the crew duties and responsibilities used by that operator. Refer to AC 120-28 and AC 120-29 for a more detailed description of these requirements.

7) The operator’s manuals must contain clear and concise policy, criteria, guidance, and direction to its flightcrews and other persons involved in its CAT II/III operations. To be acceptable, these manuals must meet the criteria of 14 CFR, this order, and the appropriate CAT II/III ACs. These manuals must adequately address the following:

- Airport and runway requirements, including the additional runway field length required;
- Airborne and ground-based equipment required for the various minimums;
- Methods for determining that the aircraft is Airworthy for the intended operation, including minimum equipment list (MEL)/Configuration Deviation List (CDL) requirements;
- Flightcrew procedures, crew duties, and crew responsibilities;
- Instrument approach procedures (IAP) and minimums authorized;
- Pilot training and qualifications; and
- Any operating restrictions or limitations necessary to safely conduct these operations.

8) Before approving the operator’s proposal, the inspector must ensure that the operator’s CAT II/III Continuous Airworthiness Program (CAP) includes the special airborne equipment and procedures required for CAT II/III operations. Coordination with the PMI and the PAI is essential before granting operational approval. The inspector shall not issue OpSpecs that authorize CAT II/III operations until all requirements are met. This includes approval of the operator’s CAT II/III maintenance program for the particular aircraft involved.

9) When the application package is deemed to be acceptable to the inspector, with the concurrence of the AWOS, a letter of approval should be sent to the operator. Figure 4-13, Sample Memo of Approval of a Category II/III Application Package, contains an example of a letter of approval.

F. The Demonstration Phase (Phase Four). Phase Four is referred to as the OUSD. This phase begins after the POI has received concurrence from the AWOS that the operator’s application package is in order and has been approved. The OUSD plan submitted with the application is the primary vehicle used for conducting this phase. Guidance for the OUSD and an example of an acceptable OUSD plan are contained in this section.

1) Special Considerations. Special design requirements and special maintenance programs are necessary to achieve the airborne system reliability required for the conduct of CAT II/III operations. The special maintenance programs necessary for CAT II/III operations are extensive and expensive and are usually the largest factors affecting an operator’s decision of whether or not to conduct these operations.
2) **Purpose.** The purpose of the OUSD is to demonstrate and validate the reliability and performance of lower minimum programs (LMP) in line operations consistent with the operational concepts specified in AC 120-28 and AC 120-29, as applicable. An OUSD is required for CAT II and III approvals. Demonstration requirements are established considering any applicable FAA Flight Standardization Board (FSB) criteria, applicability of previous operator service experience, experience with a specific aircraft type by other operators, experience of crews of that operator, and other such factors. The demonstration period is typically 6 months long for each phase (CAT II and III) of a progression to CAT III landing minimums. This permits the FAA to evaluate the ability of the operator to maintain and operate its proposed LMP system. During the demonstration period, at least 10 percent of the required number of landings should be observed by an appropriately qualified FAA Operations inspector. For this purpose, an appropriately qualified operations inspector is:

- For small piston and turboprop airplanes, or helicopters, qualified in the appropriate category and class;
- For large helicopters, qualified in a helicopter over 12,500 pounds;
- For large piston or turboprop airplanes, qualified in an airplane over 12,500 pounds;
- For small turbojets, qualified in the appropriate category and class; and
- For large turbojets, qualified in a turbojet airplane over 12,500 pounds.

3) **Subphases.** The OUSD phase consists of two subphases:

a) The first subphase is referred to as the OUSD landing phase. During this period, the operator conducts the required number of landings using the CAT II or III systems approved in the submitted OUSD plan. The weather minimums used by the operator is prescribed based on the operator’s current authorization for that aircraft. A success rate of 90 percent is required.

- 1. Parts 121, 125, and 135 operators seeking CAT III approval, or seeking to conduct CAT II using autoland or HUD to touchdown, must be issued OpSpec/MSpec C061 (autoland) or OpSpec/MSpec C062 (HUD to touchdown) prior to the landing demonstrations. Part 121, § 121.579(c), part 125, § 125.329(d), and part 135, § 135.93(d) specify that these types of operations must be authorized by OpSpecs.

- 2. Demonstrations may be conducted in line operations, during training flights, or during aircraft type or route proving runs. The demonstration period should run for 6 months. Therefore, if an operator seeks CAT II initially and then CAT III subsequently, the total demonstration period will be 12 months.

- 3. The POI issues the appropriate OpSpec/MSpec/LOA (OpSpec/MSpec/LOA C059 or C060 (H108 or H109 for helicopter operations), as applicable) with any appropriate restricted lower minimums and any other restrictions required for the OUSD demonstration phase. If an excessive number of failures (e.g., unsatisfactory landings or system disconnects) occur during the landing demonstration program, a determination should be made for the need for additional demonstration landings, or for consideration of other remedial action (e.g., procedures adjustment, wind constraints, or system modifications).
b) The second phase, the OUSD demonstration phase, begins after completion of the OUSD landing phase. The OUSD demonstration phase is typically 6 months, unless otherwise indicated in Table 4-5A and subparagraph F4)d). The purpose of the OUSD demonstration phase is to verify that the operator’s proposed maintenance and operational procedures are suitable for CAT II/III operations. To reach the lowest CAT III minimums, a second OUSD demonstration phase may be required, as specified in Table 4-5A and subparagraph F4)d). After successful completion of all required OUSD demonstration subphases, unrestricted minimums are issued by the POI with concurrence from the regional AWOS.

4) OUSD Landing and Minimums Requirements.

a) CAT III Authorization Basis.

1. AC 120-28C Authorized Aircraft. Aircraft authorized under AC 120-28C and earlier typically contain a statement authorizing CAT IIIa or CAT IIIb automatic approach and landing operations.

   a. Aircraft authorized for CAT IIIa FO or FP operations are currently limited to RVR 700 landing minimums by regulation. CAT IIIa may be authorized minimums as low as RVR 700 for TDZ, RVR 700 for Mid Runway Rollout (MID) RVR, and RVR 300 for rollout RVR after successful completion of the first 6-month OUSD.

   b. Aircraft authorized for CAT IIIb with a rollout control system that meets the criteria in AC 120-28C, Appendix 2 (FP rollout system) may be authorized minimums as low as RVR 600 for TDZ, RVR 600 for MID, and RVR 300 for rollout after successful completion of the first 6-month OUSD. The operator may then be authorized for minimums as low as RVR 400 for TDZ, RVR 400 for MID, and RVR 300 for rollout RVR after successful completion of the second 6-month OUSD.

   c. Aircraft authorized for CAT IIIb with a rollout control system that meets the criteria in AC 120-28C, Appendix 3 (FO rollout system) may be authorized minimums as low as RVR 600 for TDZ, RVR 400 for MID, and RVR 300 for rollout after successful completion of the first 6-month OUSD. The operator may then be authorized for minimums as low as RVR 300 for TDZ, RVR 300 for MID, and RVR 300 for rollout RVR after successful completion of the second 6-month OUSD.

2. AC 120-28D Authorized Aircraft. Aircraft authorized under AC 120-28D contain a statement authorizing FP or FO landing and/or rollout control systems.

   a. FP Landing System without Rollout System. Aircraft with an FP landing system without a rollout system may be authorized minimums as low as RVR 600 for TDZ, RVR 600 for MID, and RVR 300 for rollout after successful completion of the first 6-month OUSD.

   b. FP Landing System with Any Rollout System. Aircraft with an FP landing and any rollout system may be authorized minimums as low as RVR 600 for TDZ, RVR 400 for MID, and RVR 300 for rollout after successful completion of the first 6-month OUSD.
c. FO Landing System with an FP Rollout System. Aircraft with an FO landing system and FP rollout systems may be authorized minimums as low as RVR 600 for TDZ, RVR 400 for MID, and RVR 300 for rollout after successful completion of the first 6-month OUSD. The operator may then be authorized for minimums as low as RVR 400 for TDZ, RVR 400 for MID, and RVR 300 for rollout RVR after successful completion of the second 6-month OUSD.

d. FO Landing System with an FO Rollout System. Aircraft with FO landing and rollout systems may be authorized minimums as low as RVR 600 for TDZ, RVR 400 for MID, and RVR 300 for rollout after successful completion of the first 6-month OUSD. The operator may then be authorized for minimums as low as RVR 300 for TDZ, RVR 300 for MID, and RVR 300 for rollout RVR after successful completion of the second 6-month OUSD.

b) CAT II/III Experienced Operators. To meet the definition of “CAT II experienced” as used in this section, the operator must have a current OpSpec/MSpec/LOA C059 (H108 for helicopter operations) that has been authorized for at least 1 year for unrestricted CAT II operations to an RVR 1200 minimum. To meet the definition of “CAT III experienced” as used in this section, the operator must have a current OpSpec/MSpec/LOA C060 (H109 for helicopter operations) that has been authorized for at least 1 year for CAT III operations to no more than an RVR 700 minimum. Operators that have foreign authority approval from an International Civil Aviation Organization (ICAO) Member State authorizing use of lowest applicable or intended CAT II or III minimums are also considered experienced operators.

1. Experienced CAT III operators seeking a lower CAT III authorization, such as an approved RVR 600 CAT III operator seeking an RVR 300 CAT III authorization, are not required to complete an additional OUSD.

2. The inspector should ensure that the aircraft are suitable for the authorization sought, and review the operator’s training, maintenance, and operational procedures to ensure that each reflect the new authorization.

c) Summary of OUSD Landing and Demonstration Phase Requirements. Table 4-5A contains a summary of OUSD landing and demonstration phase requirements for multiple scenarios. These scenarios are described further in subparagraphs F4(d)–h).

d) Operator with No CAT II/III Experience Seeking CAT II. For a new operator (defined as one without prior CAT II/III experience) seeking CAT II for the first time, the aircraft is considered to be “new” regardless of how long the aircraft has been in the operator’s fleet. The operator must conduct 100 landings at CAT I weather minimums or greater. Upon successful completion of 90 percent of the landings, the POI may issue OpSpec/MSpec/LOA C059 (H108 for helicopter operations) authorizing CAT II operations to RVR 1600 for the duration of the 6-month maintenance OUSD. Upon successful completion of the OUSD, the POI may authorize CAT II operations to RVR 1200.
1. In standard CAT II operations, the objective of the requirement for an operator to validate the CAT II maintenance program for at least 6 months with minimums restricted to DH 100 and RVR 1600 is to ensure that the required level of airborne equipment reliability is achieved. This is to ensure that frequent malfunctions will not occur in standard CAT II operations (DH 100 and RVR 1200). The design features of CAT III airborne equipment significantly reduce the potential for failures that could adversely affect standard CAT II operations. As a result, validation of the CAT II maintenance program before conducting operations to DH 100/RVR 1200 is not necessary if these operations are conducted under a restriction that requires the airborne equipment to operate to CAT III standards (e.g., FP or FO automatic landing).

2. If the operator requests to eliminate the 6-month restriction (DH 100 and RVR 1600) based on operational credit for the use of CAT III systems to conduct CAT II operations, the operator’s OpSpec/MSpec/LOA C059 (H108 for helicopter operations) must specify that all CAT II operations using DH 100 and RVR 1200 must be conducted with the airborne equipment operating to CAT III standards. This limitation should read FP autoland only, or FP/FO autoland only, as appropriate, for aircraft equipped with CAT III automatic landing systems, or FP HUD only for aircraft equipped with CAT III HUD. For DH 100 and RVR 1200 operations, these restrictions must remain in the operator’s OpSpecs/MSpecs/LOAs until the CAT II maintenance program for that aircraft is successfully validated.

e) Operator with No CAT II/III Experience Seeking CAT III. For a new operator (defined as one without prior CAT II/III experience) seeking CAT III for the first time, the aircraft is considered to be “new” regardless of how long the aircraft has been in the operator’s fleet. The operator must conduct 100 landings at CAT I weather minimums or greater. Upon successful completion of 90 percent of the landings, the POI may issue OpSpec/MSpec/LOA C059 (H108 for helicopter operations) authorizing CAT II operations to RVR 1200 for the first 6-month maintenance OUSD. This RVR 1200 minimum is based on the use of CAT III landing systems (autoland or HUD). Upon successful completion of this OUSD, the POI may issue OpSpec/MSpec/LOA C060 authorizing CAT III operations to RVR 700 or 600 for the duration of the second 6-month maintenance OUSD. If the operator is requesting minimums below RVR 600, a second 6-month OUSD is required. Upon successful completion of the second OUSD, the POI may authorize CAT III operations to RVR 400 or 300.

f) Operator with CAT II Experience Seeking CAT II for a New Aircraft. For an experienced CAT II operator seeking CAT II for a new aircraft (defined as an aircraft new to the operator’s fleet), the operator must conduct 50 landings at CAT I weather minimums or greater. Upon successful completion of 90 percent of the landings, the POI may issue OpSpec/MSpec/LOA C059 authorizing CAT II operations to RVR 1600 for the duration of the 6-month maintenance OUSD. Upon successful completion of the OUSD, the POI may authorize CAT II operations to RVR 1200.

NOTE: An operator may be approved to eliminate the 6-month restriction (DH 100 and RVR 1600) based on operational credit for the use of CAT III systems to conduct CAT II operations, in accordance with subparagraph F4)d)2.
g) Operator with CAT II Experience Seeking CAT II with New Flight Control Equipment. For an experienced CAT II operator seeking CAT II for the same aircraft with new equipment, such as the addition of a CAT II or III HUD, the operator must conduct 25 landings at CAT I weather minimums or greater. The first 3-month maintenance OUSD may run concurrently with the landing phase. Upon successful completion of 90 percent of the landings and the first 3-month maintenance OUSD, the POI may issue OpSpec/MSpec/LOA C059 (H108 for helicopter operations) authorizing CAT II operations to RVR 1600 for the duration of the 3-month maintenance OUSD. Upon successful completion of the second OUSD, the POI may authorize CAT II operations to RVR 1200.

1. Although all demonstration landings using the new flight control equipment must be conducted at CAT I weather minimums or greater, at the POI’s discretion the operator may continue to use CAT II minimums, provided the requirements of the current authorization continue to be met. The operator should submit a plan to state how they will transition to the new equipment and conduct the landing OUSD. This plan should address the differences between CAT II operations using the current authorization, proposed CAT II operations using new equipment, and the plan for conducting the landing OUSD in CAT I or better conditions using the new equipment, and it should address operational control in CAT II conditions, training, procedures, and profiles. With the concurrence of the AWOS, the POI may authorize continued CAT II operations in the transition using the previously authorized equipment if those operations can be conducted safely.

2. If CAT II operations cannot be conducted safely using the current authorization due to differences in crew procedures, training, etc., the operator’s CAT II authorization should be deauthorized until it can be reauthorized after the OUSD landing phase in accordance with subparagraph F4)g).

NOTE: An operator may be approved to eliminate the 6-month restriction (DH 100 and RVR 1600) based on operational credit for the use of CAT III systems to conduct CAT II operations, in accordance with subparagraph F4)d)2.

h) Operator with CAT II Experience Seeking CAT III with New Flight Control Equipment. For an experienced CAT II operator seeking CAT III for the same aircraft with new equipment, the operator must conduct 50 landings at CAT I weather minimums or greater. Upon successful completion of 90 percent of the landings, the POI may issue OpSpec/MSpec/LOA C059 (H108 for helicopter operations) authorizing CAT II operations to RVR 1200 for the first 6-month maintenance OUSD. This RVR 1200 minimum is based on the use of CAT III landing systems (autoland or HUD). Upon successful completion of this OUSD, the POI may issue OpSpec/MSpec/LOA C060 authorizing CAT III operations to RVR 700 or 600 for the duration of the second 6-month maintenance OUSD. If the operator is requesting minimums below RVR 600, a second 6-month OUSD is required. Upon successful completion of the second OUSD, the POI may authorize CAT III operations to RVR 400 or 300.

1. Although all demonstration landings using the new flight control equipment must be conducted at CAT I weather minimums or greater at the POI’s discretion, the operator may continue to use CAT II minimums, provided the requirements of the current authorization continue to be met. The operator should submit a plan to state how they will...
transition to the new equipment and conduct the landing OUSD. This plan should address the differences between CAT II operations using the current authorization, proposed CAT II operations using new equipment, and the plan for conducting the landing OUSD in CAT I or better conditions using the new equipment, and it should address operational control in CAT II conditions, training, procedures, and profiles. With the concurrence of the AWOS, the POI may authorize continued CAT II operations in the transition using the previously authorized equipment if those operations can be conducted safely.

2. If CAT II operations cannot be conducted safely using the current authorization due to differences in crew procedures, training, etc., then the operator’s CAT II authorization should be deauthorized until it can be reauthorized after the OUSD landing phase in accordance with subparagraph F4)g).

   i) Operator with CAT II Experience Seeking CAT III for the Same Aircraft. For an experienced CAT II operator seeking CAT III for the same aircraft with the same equipment, the operator must conduct 50 landings at CAT II weather minimums or greater. Upon successful completion of 90 percent of the landings, the POI may issue OpSpec/MSpec/LOA C060 authorizing CAT III operations to RVR 700 or 600 for the 6-month maintenance OUSD. This OUSD is required even if the operator is not seeking minimums below RVR 600. Upon successful completion of the OUSD, the POI may authorize CAT III operations to RVR 400 or 300.

   j) Operator with CAT II Experience Seeking CAT III for a New Aircraft. For an experienced CAT II operator seeking CAT III for an aircraft new to the operator’s fleet, the operator must conduct 50 landings at CAT I weather minimums or greater. With successful completion of 90 percent of the landings, the POI may issue OpSpec/MSpec/LOA C059 (H108 for helicopter operations) authorizing CAT II operations for the duration of the 6-month maintenance OUSD. Upon successful completion of this OUSD, the POI may issue OpSpec/MSpec/LOA C060 authorizing CAT III operations to RVR 700 or 600 for the duration of the second 6-month maintenance OUSD. If the operator is requesting minimums below RVR 600, a second 6-month OUSD is required. Upon successful completion of the second OUSD, the POI may authorize CAT III operations to RVR 400 or 300.

   k) Operator with CAT III Experience Seeking CAT II for a New Aircraft. For an experienced CAT III operator seeking CAT II for an aircraft new to the operator’s fleet, the operator will conduct 50 landings at CAT I weather minimums or better. Upon successful completion of 90 percent of the landings, the POI may issue OpSpec/MSpec/LOA C059 (H108 for helicopter operations) to conduct CAT II operations to RVR 1600 for the duration of the 6-month maintenance OUSD. Upon successful completion of the OUSD, the POI may authorize CAT II operations to RVR 1200.

   NOTE: An operator may be approved to eliminate the 6-month restriction (DH 100 and RVR 1600) based on operational credit for the use of CAT III systems to conduct CAT II operations, in accordance with subparagraph F4)d)2.

   l) Operator with CAT III Experience Seeking CAT III for a New Aircraft. For an experienced CAT III operator seeking CAT III for an aircraft new to the operator’s fleet, the
operator must conduct 50 landings at CAT I weather minimums or greater. With successful completion of 90 percent of the landings, the POI may issue OpSpec/MSpec/LOA C059 (H108 for helicopter operations) authorizing CAT II operations to RVR 1200 for the first 6-month maintenance OUSD. Upon successful completion of this OUSD, the POI may issue OpSpec/MSpec/LOA C060 authorizing CAT III operations to RVR 700 or 600 for the duration of the second 6-month maintenance OUSD. If the operator is requesting minimums below RVR 600, a second 6-month OUSD is required. Upon successful completion of the second OUSD, the POI may authorize CAT III operations to RVR 400 or 300.

m) Operator with CAT III Experience Seeking CAT III with New Flight Control Equipment. For an experienced CAT III operator seeking CAT III for the same aircraft with new equipment (previous CAT III with autoland now adding a HUD), the operator must conduct 25 landings at CAT II weather minimums or better. The first 3-month maintenance OUSD may run concurrently with the landing phase. With successful completion of 90 percent of the landings and the 3-month OUSD, the POI may issue OpSpec/MSpec/LOA C060 authorizing CAT III operations to RVR 700 or 600 for the duration of the second 3-month maintenance OUSD. If the operator is requesting minimums below RVR 600, a second 6-month OUSD is required. Upon successful completion of this OUSD, the POI may authorize CAT II operations to RVR 400 or 300.

5) Operators with Small Fleets. The FAA recognizes that it may be impractical to require operators with limited fleet size and limited access to SA CAT I and CAT II/III runways to accumulate 100 demonstration approaches and landings. The number of required landings is dependent on the operator’s prior experience with SA CAT I or CAT II/III, the number of aircraft in the operator’s fleet, and the FAA’s experience in SA CAT I or CAT II/III operations with the operator’s aircraft. The POI, with concurrence from the RNGB, will determine what is manageable for the operator, while still meeting the intent of AC 120-28 and AC 120-29. Past practice has allowed a combination of approach and landings in a level C or better flight simulator and in the actual aircraft.

G. Sample OUSD Plan. Figure 4-14, Sample Operator Use Suitability Demonstration Plan, contains an example of an OUSD plan that is acceptable to the FAA.

H. The Approval Phase (Phase Five). OpSpec/MSpec/LOA authorizations are issued in accordance with the guidance, direction, and procedures found in Volume 3, Chapter 18, Section 5. Part 129 OpSpec guidance is found in Volume 12, Chapter 2, Section 5.

1) Approval of Landing Minimums. When the data from the operational demonstration has been analyzed and found acceptable, an applicant may be authorized the lowest requested minimums consistent with the requirements in subparagraph F4) (phase four).

2) Qualification and Currency—Operational Requirements. The number or percentage of flightcrew members who are current and qualified prior to authorizing the operator for either restricted or unrestricted CAT II or III operations are at the discretion of the POI. Because the OUSD landing phase has no required timeline (just a required number of successful landings), the operator should have an approved plan and policy to ensure that each flightcrew member required for a specific aircraft/flight is current and qualified for CAT II or III operations.
prior to commencing any CAT II or III approach and landing operations, including required OUSD landings and either restricted or unrestricted CAT II/III authorizations. Typically, the operator will receive approval for flightcrew training (procedures, profiles, simulator requirements, etc.) and should begin training their pilots before the required OUSD landing and maintenance phases. This will ensure that a large percentage of pilots are current and qualified for CAT II or III operations upon issuance of unrestricted CAT II/III landing minimums.

3) **OpSpecs/MSpecs/LOAs.**

   a) **Approved Airports and Runways.** All standard CAT II/III operations are restricted to airports and runways that meet the special safety requirements necessary for CAT II/III operations. Within the United States, all approved CAT II/III airport and runway operations are conducted in accordance with approved CAT II/III IAPs published in part 97. U.S. CAT II/III operations shall only be conducted in accordance with an approved part 97 CAT II/III IAP.

   b) **Foreign Airports and Runways.** For operations in foreign countries, AFS-410 maintains a list of approved CAT II/III airports/runways. Each runway must be authorized in the Foreign Airports/Runways table of OpSpec/MSpec/LOA C059 (CAT II) and/or C060 (CAT III), as appropriate. Even though a particular runway is approved for CAT II/III operations, an operator cannot be authorized to conduct CAT II/III operations at that location until that particular CAT II/III operation is authorized in the operator’s OpSpec/MSpec/LOA. This list is available on the AFS-410 public Web site at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410/status_lists/.

   c) **Special Terrain Runways.** AFS-410 also maintains a list of special terrain runways that must be authorized in OpSpec/MSpec/LOA C059 and/or C060 to utilize any CAT II/III minimums that require the use of autoland or HUD to touchdown. This AFS-410 list shows all CAT II/III special terrain runways in the United States, as well as all approved aircraft M/M/S for each runway. This list is available on the AFS-410 public Web site at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410/status_lists/. See AC 120-28, Appendix 8, for the full criteria for authorizing an operator to utilize CAT II/III minimums at a special terrain runway. A brief summary is presented here for guidance.

   1. **Case I—First of a Type/Model at Any Special Terrain Airport/Runway.** The operator must perform at least four to six successful evaluation landings (in nonrevenue service) in typical atmospheric conditions regarding wind and turbulence, using the applicable operational aircraft configuration, with a representative aircraft from the fleet. If the flight guidance system may be susceptible to an uncertain performance characteristic (e.g., long flare in a tailwind condition or pitch/throttle coupling oscillation during flare), the evaluation should take place when the system may be put to an appropriate test of the applicable crosswind, tailwind, headwind, wind gradient, or other critical condition applicable, consistent with the operator’s proposed conditions or limits and the AFM’s demonstrated conditions or limits. CAT III-qualified FAA personnel should observe the demonstrations and evaluate the data. Upon successful completion of this demonstration, the operator must conduct 15 landings in
CAT I or better conditions in line operations and provide a report of each landing to the RNGB via their POI. Upon successful completion of 15 landings in CAT I in line operations, the POI may authorize the operator for CAT II/III operations to that runway in OpSpec/MSpec/LOA C059 and/or C060.

2. Case II—Subsequent Special Terrain Airport/Runway Authorization for a Particular Type. Case II addresses the “First of a Model” at a particular runway, but at a subsequent “Special Terrain Airport” runway (e.g., after an aircraft type has already been successfully demonstrated at some special terrain airport runway, such as the first ever B767 type autoland or HUD to touchdown use at Pittsburgh International Airport (KPIT) runway 28L, after prior approval at Seattle Tacoma International Airport (KSEA)). Case II requirements are nearly identical to Case I requirements, with some differences in data recording requirements.

3. Case III—Subsequent Operator Use of a Particular Special Terrain Airport/Runway and Type Combination. In Case III, the type/model of aircraft has already been approved at the requested runway (A320 approved at DEN 34R, a new A320 operator seeks 34R approval). Any authorization should be based on 15 or more successful line landings reported by the operator requesting authorization in CAT I or better weather conditions. The experience reported by the operator should include no unsuccessful landing attempts or failures. If problems or failures are reported, then Case II or Case I procedures may be needed to resolve potential unique aircraft configuration effects, procedural effects, maintenance effects, or other effects.

4. Case IV—“Not-For-Credit” Use of Special Terrain Airport/Runway and Type Combinations. Operators may also request “Not-For-Credit” use of special terrain runways, which authorizes use of autoland or HUD to touchdown, but with no landing minimums credit (CAT I autoland or HUD to touchdown only). In this instance, a representative of the certificate-holding district office (CHDO) may evaluate the use during first line operations or specify that an operator representative (e.g., technical pilot, qualified management pilot, or check airman who is experienced with autoland/HUD operation and performance) assess and verify adequate performance. The CHDO should request and review reports from line crews for at least the first five line landings to confirm appropriate performance. If problems occur, processes for Cases I through IV may be needed to resolve problems depending on the severity and cause of problem. A “Not-For-Credit” evaluation may be done in line operation as long as no previous reported problems have been noted with the same or similar aircraft type, and no Notices to Airmen (NOTAM) or other restrictions preclude such operations. If problems have been reported for the same or similar type, treatment as for Case I through III, as applicable above, may be appropriate.
Figure 4-4. Category II/III Evaluation and Approval Process Flow Diagram for Parts 91, 91K, and 125

Operator makes inquiry or request to FAA about Special Authorization (SA) Category (CAT) II, CAT III, and/or CAT III authorization

PHASE ONE
1. FAA advises operator of requirements
2. Regional Air Weather Operations Specialist (AWOS) is advised of operator’s intent
3. FAA and operator develop understanding of subject area
4. Phase complete when operator understands the requirements for FAA acceptance

If evaluation is unsatisfactory, return submission to the operator for correction and/or terminate the phase

Operator prepares and formally submits a new or revised application

PHASE TWO
1. FAA examines documents for completeness
2. Phase complete when FAA accepts application

PHASE THREE
1. FAA evaluates the application for compliance with regulations and guidance
2. FAA approves necessary training, evidence, manual, and other programs
3. Phase complete when results of FAA evaluation are satisfactory
4. If appropriate, FAA grants conditional approval

PHASE FOUR
1. FAA plans for the Operator Use Suitability Demonstration (OUSD) when required
2. Operator demonstrates ability
3. Phase complete when FAA accepts the operator’s demonstrated ability

PHASE FIVE
1. FAA approves the operator’s program by the issuance of operations specification (OpSpec), management specification (MSpec), or letter of authorization (LOA) as applicable

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### Figure 4-5. Category II/III Approval Job Aid (Operations) for Parts 91, 91K, and 125

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<tr>
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<td>New Aircraft to Operator: Yes □ No □</td>
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<td>Upgraded Equipment on Existing Aircraft: Yes □ No □</td>
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### FLIGHT OPERATIONS

1. OPERATOR PROCEDURES

1.A Type of Operation

1.B CAT II and CAT III Instrument Approach Procedures (IAP)


1.D Crew Coordination and Monitoring Procedures

1.E Callouts

1.F Use of Decision Altitude (DA) (H) (Fail Passive (FP))

1.G Use of Alert Height (AH) (Fail Operational (FO))

1.H Crew Briefings

1.I Configurations

1.J Non-Normal Operations and Procedures

1.K Special Environmental Considerations (as applicable)

1.L Continuing CAT II/III Approaches in Deteriorating Weather

1.M Dispatch Planning and Minimum Equipment List (MEL)/Configuration Deviation List (CDL) Requirements

1.N Aircraft System Suitability Demonstration (as required)

1.O Operator Use Suitability Demonstration (OUSD)

1.P Data Collection/Analysis for Airborne System Demonstrations

1.Q Operational Procedure for Return to Service

2. TRAINING AND CREW QUALIFICATION

2.A Initial Training

2.B Recurrent Training/Qualification

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<td>2.F</td>
<td>Differences Training</td>
</tr>
<tr>
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<td>Simultaneous Training and Qualification for CAT II and III</td>
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<td>Surface Movement Guidance and Control System (SMGCS) Training</td>
</tr>
<tr>
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</tr>
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<td>Advanced Qualification Program (AQP) and Single-Visit Training (SVT) Program Exemptions</td>
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</tbody>
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### 3 AIRPLANE AND EQUIPMENT

| 3.A | Airborne Systems for CAT II |
| 3.B | Airborne Systems for CAT III |
| 3.C | Automatic Flight Control System (AFCS) and Landing Systems |
| 3.D | Flight Director (FD) Systems |
| 3.E | Head Up Display (HUD) Systems |
| 3.F | Enhanced/Synthetic Vision Systems (EVS/SVS) |
| 3.G | Hybrid Displays |
| 3.H | Required Navigation Performance (RNP) (as required) |

### 4 OPERATIONS SPECIFICATIONS

| 4.B | OpSpec/MSpec/LOA Amendments (as required) |

### 5 OPERATOR’S DOCUMENT APPLICATION PACKAGE

| 5.A | Aircraft Operations Manual (pertinent parts) |
| 5.B | Flight Operations Manual (FOM) (pertinent parts) |
| 5.C | Compliance Documents |

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23

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5.E Requested OpSpec/MSpec/LOA
5.F Implementation Timetable
5.G Minimum Equipment List (MEL)
5.H OUSD Plan
5.I Application Letter

Figure 4-6. Category II/III Approval Job Aid (Avionics/Maintenance) for Parts 91, 91K, and 125

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<td>125</td>
<td>Application for: CAT II ☐ CAT III ☐ Authorization</td>
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<tr>
<td></td>
<td>Previous CAT II: Yes ☐ No ☐ CAT III: Yes ☐ No ☐</td>
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<tr>
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<td>New Aircraft to Operator: Yes ☐ No ☐</td>
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<tr>
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<td>Upgraded Equipment on Existing Aircraft: Yes ☐ No ☐</td>
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AVIONICS/AIRWORTHINESS

1 OPERATOR CAMP

1.A Type of Operation:
1.B Integrated Program ☐ Specific Program ☐
1.C Lower Landing Minimums (LLM) Specific Procedures in General Maintenance Manual (GMM)
1.D Revision and Update LLM GMM Procedures
1.E LLM Personnel Records System
1.F LLM System and Configuration Status/Compliance for Each Aircraft
1.G LLM Mods, Additions, and Changes
1.H Mx Requirements/Log Entries Necessary to Change LLM Status
1.I Specific LLM Discrepancy Reporting Procedures Minimum Equipment List (MEL)
1.J LLM Quality Control (QC) and Quality Analysis (QA) Program
1.K Procedures to Ensure Non-LLM Qual Aircraft Remain Off Status
1.L Placarding/Logbook Procedures
1.M LLM Downgrade Procedures if Mx Performed by Unqualified Personnel
| 1.N | Return to Service Procedures |
| 1.O | LLM Continued Status Procedures |
| 1.P | Periodic Performance Sampling Procedures |
| 1.Q | LLM Parts Identification Procedures |
| 1.R | |
| 1.S | |
| 1.T | |
| 1.U | |
| 1.V | |
| 1.W | |
| 2 | INITIAL AND RECURRENT MAINTENANCE TRAINING |
| 2.A | LLM Initial Training Curriculum Document |
| 2.B | LLM Certification/Qualification Requirements |
| 2.C | Training Records System for LLM Personnel |
| 2.D | Training Equipment Description |
| 2.E | Curriculum Subject Areas |
| 2.F | Vendor or Vendor’s Outside Parts Procedures and LLM Program Compatibility |
| 2.G | Component Tracking and Control Procedures |
| 2.H | Component Mods and Changes (Airworthiness Directives (AD), Engineering Orders (EO), etc.) Tracking Procedures |
| 2.I | LLM Recording and Reporting Procedures for System Malfunctions |
| 2.J | LLM Software Install, Test, Update, Evaluate, Control Procedures |
| 2.K | MEL Procedures (Remarks Section, Limitations, Upgrade/Downgrade) |
| 2.L | LMM Required Inspection Items (RII) Components, Systems, and Software |
| 2.M | |
| 2.N | |
| 2.O | |
| 2.P | |
| 2.Q | |
| 3 | TEST EQUIPMENT/CALIBRATION STANDARDS |
| 3.A | Required Accuracy and Reliability Primary/Secondary Standards |
| 3.B | Contract Maintenance or Vendor Test Equipment Reliability Procedures |
| 3.C | Dedicated LMM Test Equipment Listing |
| 3.D |
|---|---|
| **4** | RETURN TO SERVICE PROCEDURES |
| 4.A | LMM Upgrade/Downgrade Procedures |
| 4.B | Interdepartmental LLM Aircraft Status Notification Procedure |
| 4.C | Component/System Testing Level Requirements |
| 4.D | Built-In Test Equipment (BITE) Procedures |
| 4.E | Contractor/Vendor Training and Authorization for Return to Service |
| 4.F |
| 4.G |
| 4.H |
| **5** | PERIODIC AIRCRAFT SYSTEM EVALUATIONS |
| 5.A | Logbook Entry Procedures |
| 5.B | Recordkeeping Procedures |
| 5.C | Avionics/Airframe Manufacturers Procedures |
| 5.D | Engineering Analysis Procedures |
| **6** | RELIABILITY REPORTING AND QUALITY CONTROL |
| 6.A | Operator Use Suitability Demonstration (OUSD) Report |
| 6.B | Monthly Summary Report (following OUSD to certificate-holding district office (CHDO)) Format |
| 6.C | Reliability and Reporting Requirements After 1-Year Period (6.B) |
| **OPERATOR’S DOCUMENT APPLICATION PACKAGE** |
| 7 | GMM-Pertinent Parts |
| 7.A | LLM Initial/Recurrent Training Program |
| 7.B | LLM Personnel Records System |
| 7.C | MEL Procedures |
| 7.D | LLM QC and QA Program |
| 7.E | Return to Service Procedures |
Table 4-5. Special Authorization Category I, Special Authorization Category II, and Category II RVR 1000 Authorization

<table>
<thead>
<tr>
<th>Requested</th>
<th>Current Authorization</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Authorization (SA) CAT I</td>
<td>CAT II or III authorized using Head Up Display (HUD)</td>
<td>Review operator procedures and authorize operations specification (OpSpec)/management specification (MSpec)/letter of authorization (LOA).</td>
</tr>
<tr>
<td>SA CAT I</td>
<td>CAT II or III not authorized using HUD</td>
<td>CAT II or III approval process required.</td>
</tr>
<tr>
<td>SA CAT II</td>
<td>CAT II or III authorized using autoland or HUD to touchdown</td>
<td>Review operator procedures and authorize OpSpec/MSpec/LOA.</td>
</tr>
<tr>
<td>SA CAT II</td>
<td>CAT II or III not authorized using autoland or HUD to touchdown</td>
<td>CAT II or III approval process required.</td>
</tr>
<tr>
<td></td>
<td>CAT II or III authorized using autoland or HUD to touchdown</td>
<td>CAT II or III approval process required.</td>
</tr>
<tr>
<td></td>
<td>CAT II or III not authorized using autoland or HUD to touchdown</td>
<td>CAT II or III approval process required.</td>
</tr>
<tr>
<td>CAT II RVR 1000</td>
<td>CAT II or III authorized using autoland or HUD to touchdown</td>
<td>Review operator procedures and authorize OpSpec/MSpec/LOA.</td>
</tr>
<tr>
<td>CAT II RVR 1000</td>
<td>CAT II or III not authorized using autoland or HUD to touchdown</td>
<td>CAT II or III approval process required.</td>
</tr>
</tbody>
</table>

SA CAT II may be authorized concurrent with Runway Visual Range (RVR) 1200 CAT II minimums when using autoland or HUD to touchdown.
Figure 4-7. Example of Completed Flight Operations Job Aid for Parts 91, 91K, and 125

<table>
<thead>
<tr>
<th></th>
<th>FLIGHT OPERATIONS</th>
<th>Operator’s Reference Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>OPERATOR PROCEDURES</td>
<td>OM = Operations Manual</td>
</tr>
<tr>
<td>✓</td>
<td>1.A Type of Operation</td>
<td>OM, 1.1.0 and 1.2.0</td>
</tr>
<tr>
<td>✓</td>
<td>1.B CAT II and CAT III Instrument Approach Procedures (IAP)</td>
<td>OM, 1.4, 1.5, and 1.6</td>
</tr>
<tr>
<td>✓</td>
<td>1.D Crew Coordination and Monitoring Procedures</td>
<td>OM Chapter 1</td>
</tr>
<tr>
<td>✓</td>
<td>1.E Callouts</td>
<td>OM Chapter 1</td>
</tr>
<tr>
<td>✓</td>
<td>1.F Use of Decision Altitude (DA)/Decision Height (DH) (Fail Passive (FP))</td>
<td>OM Chapter 1</td>
</tr>
<tr>
<td>✓</td>
<td>1.G Use of Alert Height (AH) (Fail Operational (FO))</td>
<td>Not applicable</td>
</tr>
<tr>
<td>✓</td>
<td>1.H Crew Briefings</td>
<td>OM Chapter 1</td>
</tr>
<tr>
<td>✓</td>
<td>1.I Configurations</td>
<td>OM Chapter 1</td>
</tr>
<tr>
<td>✓</td>
<td>1.J Non-Normal Operations and Procedures</td>
<td>OM Chapter 1</td>
</tr>
<tr>
<td>✓</td>
<td>1.K Special Environmental Considerations (as applicable)</td>
<td>Not Covered</td>
</tr>
<tr>
<td>✓</td>
<td>1.L Continuing CAT II/III Approaches in Deteriorating Weather</td>
<td>OM Chapter 1</td>
</tr>
<tr>
<td>?</td>
<td>1.M Dispatch Planning and Minimum Equipment List (MEL)/Configuration Deviation List (CDL) Requirements</td>
<td>No CAT II List (OM 3.1.3)</td>
</tr>
<tr>
<td>✓</td>
<td>1.N Aircraft System Suitability Demonstration (as required)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>?</td>
<td>1.O Operator Use Suitability Demonstration (OUSD)</td>
<td>Need OUSD Plan</td>
</tr>
<tr>
<td>?</td>
<td>1.P Data Collection/Analysis for Airborne System Demonstrations</td>
<td>Need OUSD Plan</td>
</tr>
<tr>
<td>?</td>
<td>1.Q Operational Procedure for Return to Service</td>
<td>No Clear Procedure found</td>
</tr>
</tbody>
</table>
Figure 4-8.  Sample Letter of Intent to Conduct Category II or III Operations

[Date]

[ABC Airlines (proposed CAT II/III operator)
127 North Street
Chardon, OH 44024]

Dear [Inspector]:

[ABC Airlines] operates 26 B-737-700 aircraft as a U.S. domestic part 121 operator with our operational headquarters located in Cleveland, Ohio. We conduct scheduled operations throughout the Northeast United States. Because of the predominant inclement weather (fog) during certain months of the year, we find it necessary to conduct Instrument Landing System (ILS) approaches at many of our Northeast stations.

During our last 2 years of operations, we have experienced an unacceptable rate of missed approaches, especially during the fall and winter months.

Our aircraft are equipped with a state-of-the-art avionics system that is certified by the Original Equipment Manufacturer (OEM) (Boeing) to conduct CAT II/III operations.

Please consider this [ABC]’s Letter of Intent (LOI) to apply for unrestricted CAT II and CAT III flight operations. We look forward to your advice and guidance on this very important endeavor.

Sincerely,

Captain Boe Sharp
Director of Operations
Figure 4-9. Sample Letter from the Operator to the Aircraft Certification Office

<table>
<thead>
<tr>
<th>Subject: Approval for (CAT II, CAT III, Copter ILS) Approaches</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>From:</td>
<td>Reply to:</td>
</tr>
<tr>
<td>Attn. of:</td>
<td>Attn. of:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>To: Manager, Aircraft Certification Office</th>
</tr>
</thead>
</table>

I am requesting assistance from the Aircraft Certification Office in determining whether the aircraft referenced below can be approved to conduct CAT II ILS approach procedures to less than 200 feet DH using the following aircraft/equipment:

- **Aircraft Model:**
- **Serial Number:**
- **Registration Number:**
- **IFR Approval Basis:**
  - (supplement or STC number)
- **Displays:**
  - (EFS 40, EDZ-756, etc., or mechanical)
- **Autopilot Model:**
- **Flight Director Model:**
- **Radio Altimeter:**
- **Avionics Suite:**
  - (single-pilot, dual-pilot, etc.)

Additional Information:

If you need additional information, please contact [name of applicant] at [telephone number] or FAA Aviation Safety Inspector (ASI) [name] at [telephone number].
Figure 4-10. Compliance Statement Examples

Example 1. Compliance Statement. Table of Contents

NOTE: The table of contents in the operator’s application package should mirror the table of contents contained in Advisory Circulars (AC) 120-29 and AC 120-28, as follows.

Lower Minimum Program (LMP) Application

CAT II and CAT III Automatic Landing Operations

TABLE OF CONTENTS

Volume I

1. General
2. Related References and Definitions
3. Background
4. Operational Concepts
5. Airborne System Requirements
6. Procedures
7. Training and Crew Qualifications
8. Airports, Navigation Facilities, and Meteorological Criteria
9. Continuing Airworthiness/Maintenance
10. Approval of U.S. Operators
11. Operator Reporting, and Taking Corrective Actions

Example 2. Compliance Statement Section 1, General

ABC Airlines, Inc. Lower Minimum Program (LMP) Application
CAT II and CAT III Automatic Landing Operations

SECTION 1. GENERAL

1. The ABC Airlines, Inc. Lower Minimum Program (LMP) Application, Volumes I and II are prepared and hereby submitted to demonstrate compliance with the FAA directives pertaining to CAT II, III, and autoland operations for the purposes of receiving FAA approval via operations specifications (OpSpecs).

2. Per the requirements contained in AC 120-29 and AC 120-28, ABC Airlines, Inc. requests the issuance of OpSpecs/management specifications (MSpecs) C059, C060,
and C061 for the B-737-700. Samples of these OpSpecs are included at the end of this section. These OpSpecs are necessary to authorize automatic landings and CAT II operations to a decision height (DH) of 100 feet and a corresponding Runway Visual Range (RVR) of 1200. CAT III operations to a DH of 50 feet and RVR of 700 feet are simultaneously applied for and here incorporated. AC 120-28, section 10.12, page 81, Initiating New Combined CAT II and CAT III programs, sets forth the acceptable provisions for the ABC Airlines, Inc. combined LMP application methodology.

3. The Compliance Table (Section 1, Page 2, Table 1) sets forth each prerequisite on the following pages. Moreover, AC 120-28 and AC 120-29 are referenced throughout.

4. This application is constructed in a manner that demonstrates compliance with each applicable paragraph of AC 120-29 and each applicable section of AC 120-28. ABC Airlines, Inc. compliance statements begin in Volume 1, Section 2, and page 1 of this application. Paragraphs/sections listed under the reference column describe how ABC Airlines, Inc. has achieved compliance with AC 120-29 and AC 120-28. A source document column lists the reference document title, section/chapter, and page numbers.

WEATHER MINIMUMS OBJECTIVES

1. ABC Airlines, Inc. seeks an initial automatic landing authorization with CAT I landing weather minimums or better and DH. After the satisfactory completion of 100 autolands with a 90% success rate has been demonstrated, CAT II minimums (100 DH/RVR 1200) can be authorized, as set forth in FAA Order 8900.1.

2. After successful completion of the 6-month Operator Use Suitability Demonstration (OUSD) period, ABC Airlines, Inc. seeks CAT III landing weather minimums of not less than 50 feet above the touchdown zone (TDZ) and not less than RVR 700.

Example 3. Compliance Statement: Compliance Statement Format (Operations)

SECTION 3. BACKGROUND (OPERATIONS)

<table>
<thead>
<tr>
<th>Advisory Circular Reference</th>
<th>Source Document</th>
<th>FAA Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major changes addressed in this revision (AC 120-29 and AC 120-28). ABC Airlines, Inc. does not seek approval for low visibility approaches using Head Up Displays (HUD), use of Required Navigation Performance (RNP), satellite-based navigation, engine inoperative CAT II or III approaches.</td>
<td>AC 120-29, paragraph 3.1, page 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AC 120-28, section 3.1, page 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-737-700 FOTM, page 4.19</td>
<td></td>
</tr>
</tbody>
</table>
Relationships of operational authorizations for CAT I, II, or IIIa and airborne system demonstrations (AC 120-29 and AC 120-28).
The B-737-700 is type certificated (TC) by the Original Equipment Manufacturer (OEM) as a CAT IIIa aircraft. No initial airworthiness demonstration of airborne equipment and systems is required.

Applicable criteria (AC 120-29 and AC 120-28).
AC 120-29 and AC 120-28 have been used to establish CAT II/III operations. ABC Airlines, Inc. will comply with AC 120-29 and AC 120-28 criteria.

CAT I, II, and III terminology (AC 120-29).

<table>
<thead>
<tr>
<th><strong>Advisory Circular Reference</strong></th>
<th><strong>Source Document</strong></th>
<th><strong>FAA Comments</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification and applicability of minimums (AC 120-29 and AC 120-28). ABC Airlines, Inc. is seeking CAT III operations. ABC Airlines, Inc. will be conducting operations using approved autoland systems and procedures. There is no proof of concept required. The airplane and its associated systems have demonstrated the necessary level of accuracy, integrity, and availability. This was shown initially during the OEM type certificate (TC) airworthiness demonstrations. Compliance will be confirmed during the OUSD and will be monitored by ABC Airlines, Inc. on a continuing basis.</td>
<td>AFM, Section 1, page 18 AFM, Section 4, pages 4A, 5, 5A, 6, 7</td>
<td></td>
</tr>
<tr>
<td>Landing (AC 120-29 and AC 120-28). Approach and Landing Concepts and Objectives (AC 120-29).</td>
<td>AC 120-29, paragraph 4.3.1, pages 4-5</td>
<td></td>
</tr>
</tbody>
</table>
ABC Airlines, Inc. is currently a CAT I operator. By this application and approval process, ABC Airlines, Inc. is seeking authorization for CAT II approaches to a DH of not less than 100 feet with a RVR of not less than 1,200 feet, and CAT III approaches to a DH of not less than 50 feet with a RVR of not less than 700 feet.

Example 4. Compliance Statement: Format (Maintenance)

SECTION 9. CONTINUING AIRWORTHINESS/MAINTENANCE (AVIONICS)

<table>
<thead>
<tr>
<th>Advisory Circular Reference</th>
<th>Source Document</th>
<th>FAA Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(15) Land verify test is required every 30 days to remain in CAT IIIa operational status.</td>
<td>Lower Landing Minimums (LLM) Configuration Maintenance Procedures (CMP), page 5, subparagraph E.1.b.3 LLMCMP, pages 10–11, subparagraph F.1.b</td>
<td></td>
</tr>
<tr>
<td>(a) ABC’s CAT II/III personnel maintenance training program defines the LLMCMP policies and procedures for low visibility and lower landing minimums operations. Personnel qualifications, syllabi, and recurrent training are outlined in the Maintenance Training Manual.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A. ABC Air Transport has submitted a CAT II/III operations manual (OM) containing nine tabbed sections, named as follows:

1) Table of Contents  
2) Preface  
3) Log of Revisions  
4) List of Effective Pages  
5) Chapter 1  
6) Chapter 2  
7) Chapter 3  
8) Chapter 4  
9) Appendix

B. It is noted that the List of Effective Pages (LEP), pages 1 and 2, have been marked FAA-approved with an effective date of 6/28/09; however, the FAA has not yet approved this OM.

C. The following is a list of concerns after review by the regional All Weather Operations Specialist (AWOS):

1) The table of contents for Chapter 1 does not list or refer in any way to CAT II procedures and instructions, while in fact the OM purports to apply to CAT II/III procedures and instructions.

2) Section 1.2.0, line 1, refers to “this CAT III manual” when in fact the OM is labeled “CAT II/III Operating Manual.”

3) The second full paragraph in Section 1.2.0 states, “The airplane to which this Manual applies may be used to conduct CAT III operations provided the instruments and items of equipment listed herein that are required for a particular CAT III operation are,” but does not state that it can be used to conduct CAT II operations.

4) Throughout the OM, CAT II and CAT III procedures and instructions are not clearly separated, resulting in some confusion to the reader. Paragraph 6.1.7 in the current edition of AC 120-28 states, “The operator should assure that to the greatest extent possible, procedures for Category III are consistent with the procedures for that operator for Category II and Category I to minimize confusion about which procedure should be used or to preclude procedural errors.”

5) In the section Pitch Modes in the ALT ACQ item, there is a typo in the word “V?S.”
MEMO

To: ABC Airlines

Subject: ABC Airlines Inc. B-737-800, CAT II/III Operations

From: Principal Operations Inspector (POI)

This is to inform you that the CAT II/III application package submitted on [indicate date] has been disapproved for the following reasons:

[list reasons for disapproval]

The application package is being returned in its entirety. Please make the corrections noted and resubmit to this office within 15 days of receipt of this letter. If you have any questions, please feel free to contact this office during regular business hours [indicate hours] at the following telephone number [indicate number].

If you have any further questions concerning this matter, please contact POI [name] at [phone number].

Sincerely,

[POI’s signature]
Figure 4-13. Sample Memo of Approval of a Category II/III Application Package

Date:

To: Principal Operations Inspector (POI)/Certificate Management Office (CMO)

From: Kent Brockman, Manager, NextGen Branch, AGL-220

Prepared by:

Subj: INFORMATION: ABC Airlines Inc. B-737-800, CAT II/IIia Operations

We have completed our Operational/Airworthiness review of the ABC Airlines Inc. application for fail passive (FP) CAT II/III approval for their B-737-800 aircraft and find they meet all the provisions set forth in the applicable advisory circulars (AC) and FAA orders.

We recommend approval be granted to initiate ABC’s Operational Use Suitability Demonstration (OUSD) as soon as practical. After successful completion of the OUSD, CAT II minimums (Decision Height (DH) 100/Runway Visual Range (RVR) 1200) may be authorized in accordance with the following provisions:

1. ABC Airlines must perform 50 landings at CAT I minimums or better, with a 90% success rate. Upon completion of these landings, a CAT II authorization with a DH of 100 feet and a RVR 1200 minimum may be authorized. This completes the OUSD landing phase.

2. ABC Airlines must then complete a 6-month OUSD demonstration phase. Upon successful completion of the demonstration phase, a CAT III authorization with an altitude height (AH) of 100 feet and a RVR 600/400/advisory minimum may be authorized.

If you have any further questions concerning this matter, please contact Inspector [name]. Call All Weather Operations Specialist (AWOS) in AGL-220 at 847-294-4670.
### Table 4-5A. Summary of Category II/III Approval Requirements

<table>
<thead>
<tr>
<th>Operator Experience</th>
<th>Level Sought</th>
<th>New Aircraft</th>
<th>Initial Mins</th>
<th>Number of Landings</th>
<th>Mins #2</th>
<th>OUSD</th>
<th>Mins #3</th>
<th>OUSD</th>
<th>Mins #4</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>CAT II</td>
<td>Yes</td>
<td>CAT I</td>
<td>100</td>
<td>RVR(^1) 1600</td>
<td>6 months</td>
<td>RVR(^1) 1200</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>New</td>
<td>CAT III</td>
<td>Yes</td>
<td>CAT I</td>
<td>100</td>
<td>RVR(^1) 1200</td>
<td>6 months</td>
<td>RVR(^2) 700 or 600</td>
<td>6 months</td>
<td>RVR(^2) 400 or 300</td>
</tr>
<tr>
<td>CAT II</td>
<td>CAT II</td>
<td>Yes</td>
<td>CAT I</td>
<td>50</td>
<td>RVR(^1) 1600</td>
<td>6 months</td>
<td>RVR(^1) 1200</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>CAT II</td>
<td>CAT II</td>
<td>Same A/C and new equipment</td>
<td>CAT I</td>
<td>25, 3-month OUSD concurrent</td>
<td>RVR(^1) 1600</td>
<td>3 months</td>
<td>RVR(^1) 1200</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>CAT II</td>
<td>CAT III</td>
<td>Same A/C and new equipment</td>
<td>CAT I</td>
<td>50</td>
<td>RVR 1200</td>
<td>6 months</td>
<td>RVR(^2) 700 or 600</td>
<td>6 months</td>
<td>RVR(^2) 400 or 300</td>
</tr>
<tr>
<td>CAT II</td>
<td>CAT III</td>
<td>Same A/C and new equipment</td>
<td>CAT II</td>
<td>25, 3-month OUSD concurrent</td>
<td>RVR 700 or 600</td>
<td>3 months(^3)</td>
<td>RVR 400 or 300</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>CAT II</td>
<td>CAT III</td>
<td>Yes</td>
<td>CAT I</td>
<td>50</td>
<td>RVR(^1) 1200</td>
<td>6 months</td>
<td>RVR(^2) 700 or 600</td>
<td>6 months</td>
<td>RVR(^2) 400 or 300</td>
</tr>
<tr>
<td>CAT III</td>
<td>CAT II</td>
<td>Yes</td>
<td>CAT I</td>
<td>50</td>
<td>RVR(^1) 1600</td>
<td>6 months</td>
<td>RVR(^1) 1200</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>CAT III</td>
<td>CAT III</td>
<td>Yes</td>
<td>CAT I</td>
<td>50</td>
<td>RVR(^1) 1200</td>
<td>6 months</td>
<td>RVR(^2) 700 or 600</td>
<td>6 months</td>
<td>RVR(^2) 400 or 300</td>
</tr>
<tr>
<td>CAT III</td>
<td>CAT III</td>
<td>Same A/C and new equipment</td>
<td>CAT II</td>
<td>25, 3-month OUSD concurrent</td>
<td>RVR 700 or 600</td>
<td>3 months(^3)</td>
<td>RVR 400 or 300</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

1 RVR 1600 and RVR 1200 are issued via OpSpec, MSpec, or LOA C059 (H108 for helicopter operations). See paragraph 4-193, Operator Authorization—SA CAT I, SA CAT II, CAT II RVR 1000, for approval of SA CAT I, SA CAT II, or CAT II RVR 1000.

2 RVR 700, RVR 600, RVR 400, and RVR 300 minimums are issued via OpSpec, MSpec, or LOA C060 (H109 for helicopter operations). Aircraft certified for CAT IIIa operations are limited to RVR 700. Certified fail passive (FP) landing systems are eligible for minimums as low as RVR 600 TDZ, RVR 400 MID. Fail operational (FO) landing systems are eligible for minimums as low as RVR 300, based on the type of rollout system.

3 A second OUSD and all reporting requirements are required even if the operator is not seeking RVR 400 or 300 minimums.
Figure 4-14. Sample Operator Use Suitability Demonstration Plan

1) This Operator Use Suitability Demonstration (OUSD) plan contains direction and guidance to be utilized by ABC Airlines, Inc. personnel responsible for conducting and managing demonstration instrument landing system (ILS)-coupled approach and automatic landings required for FAA issuance of operations specification (OpSpec) C059. It shall also provide applicable guidance and direction for required follow-on demonstration landings to be required for FAA issuance of OpSpec C060.

a) The Director of Operations (DO) is responsible for implementation of all operational procedures required by this OUSD plan. The Director of Maintenance (DOM) is responsible for implementation of all maintenance procedures required by this OUSD plan. They are jointly responsible for providing routine and regular updates and feedback to ABC Inc.’s principal operations inspector (POI), principal maintenance inspector (PMI), and principal avionics inspector (PAI). Operational/airworthiness demonstrations, aircraft system suitability, and operational use suitability demonstrations must be completed as described in Advisory Circular (AC) 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach, paragraphs 10.5.1 and 10.5.2, unless otherwise specified by the certificate-holding district office (CHDO). AC 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout, specifies similar OUSD requirements for CAT III approval. Once ABC is approved for CAT II operations, this plan will be updated with the appropriate CAT III OUSD requirements. The purpose of these operational demonstrations is to determine or validate the use and effectiveness of the applicable aircraft flight guidance systems, training, flightcrew procedures, maintenance program, and manuals applicable to the program being approved. ABC’s B-737-700 FAA-approved Aircraft Flight Manual (AFM) references both ACs as the criteria used as the basis for both CAT II and CAT III airworthiness demonstrations; therefore our B-737-700 fleet is already considered to meet the provisions of 10.5.1. This OUSD plan is designed to address provisions of 10.5.2, requiring verification of OUSD for initial CAT II approval.

b) For CAT II authorization, at least 100 landings will be accomplished in line operations using the autoland system, with a success rate of at least 90 percent.

NOTE: It is a good practice to conduct at least one approach using the autoland system to each runway intended for CAT II operations in weather better than that requiring use of CAT II minimums. Such demonstrations may be conducted in line operations, or during training or ferry flights. In any case, every demonstration autoland must be conducted in weather equal to or greater than ABC Inc.’s current CAT I operating minimums: 200 feet decision altitude (DA), Runway Visual Range (RVR) 1800.

1. If an excessive number of failures (e.g., unsatisfactory landings or system disconnects) occur during the landing demonstration program, a determination will be made for the need for additional demonstration landings, or for consideration of other remedial action (e.g., procedures adjustment, wind constraints or system modifications).

2. The system must demonstrate reliability and performance in line operations consistent with the operational concepts specified in and required by OpSpec C059, Category II Instrument Approach and Landing Operations (Optional: 14 CFR parts 91, 121, 125, 125 Letter of Deviation Authority (LODA) holder, 135, and 91K Operators) and Special Authorization Category I Instrument Approach and Landing Operations (Optional: Part 91 Operators).

3. Landing demonstrations will generally be accomplished on U.S. facilities or international facilities acceptable to the FAA. International facilities acceptable to the FAA are published at the Flight

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4. At ABC Inc.’s discretion, demonstrations may be made on other runways and facilities if sufficient information is collected to determine the cause of any unsatisfactory performance (e.g., critical area was not protected). No more than 50 percent of the demonstrations may be made on such facilities.

5. U.S. Facilities Approved for CAT II and CAT III Demonstrations. U.S. ILS facilities that have published Title 14 of the Code of Federal Regulations (14 CFR) part 97 CAT II or CAT III instrument approach procedures (IAP) are acceptable for CAT II and CAT III demonstrations.

6. Foreign Facilities Approved for CAT II and CAT III Demonstrations. Only those approved foreign ILS facilities listed on the Flight Technologies and Procedures Division (AFS-400) Web site (http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410) are approved for U.S. air carriers to conduct CAT II and/or CAT III demonstrations.

NOTE 1: Every demonstration autoland must be conducted in weather equal to or greater than ABC Inc.’s current CAT I operating minimums: 200 feet DH, RVR 1800.

NOTE 2: For takeoff or landing operations less than RVR 1200, air carriers must have low visibility training in accordance with the current edition of AC 120-57, Surface Movement Guidance and Control System.

2) Documentation.

a) ABC monitors aircraft maintenance performance trends through the Continuous Analysis and Surveillance Program (CASP). CASP is designed to assist in detection and correction of recurring problems in the B-737-700 fleet. CASP action is predicated on the inbound Boeing Airlines for America (A4A) codes entered in the logbook. Should any A4A code be entered in the logbook three times or more in any 20-day period, the item will be flagged and analyzed for systemic corrective action by the engineering department. Therefore, it is extremely important for crewmembers to enter the correct A4A code when making logbook entries, particularly when related to the aircraft autoflight system and autoland performance. Flightcrews will use form ABC OUSD-1 (sample below) to record all unsatisfactory autoland approaches. A logbook entry is also required for any unsatisfactory autoland. Forms ABC OUSD-1 will be left with the aircraft logbook for scanning into the maintenance tracking system (retained for 1 year). This information will also be retrieved by the CASP and published monthly in the Fleet Maintenance CASP Report. All autoflight system history is also available in the maintenance tracking system by the applicable A4A chapter.

NOTE: The crew is responsible to notify dispatch of all autolands by Aircraft Communications Addressing and Reporting System (ACARS) message at the end of each flight. Dispatch will ensure that maintenance control is notified of all autolands in a timely manner so that appropriate recordkeeping and maintenance action can be taken. In the event of an unsuccessful autoland, the crew shall submit an Autoland Discrepancy Form in addition to the ACARS report. If ACARS is inoperative or not installed, the flightcrew must submit an Autoland Discrepancy Form to the chief pilot.

b) Autoland messages are accessed through ACARS, page 2 of the FLT Summary page, Automatic Approach, as in the following example:
Example: Autoland Messages on ACARS Page 2 of Flight Summary

FLIGHT SUMMARY PAGE 2: AUTOMATIC APPROACH

(1) Enter required information as follows:

1. Select YES;
2. Enter RUNWAY used;
3. Enter reported RVR visibility in feet;
4. Enter SAT or UNSAT, as appropriate for the autoland;
5. Enter DISC ALT disconnect altitude in feet or enter 0 (zero) for full autoland; and
6. SEND when all required fields are filled.

(2) Reporting Requirements. Upon receipt of an ACARS, FLIGHT SUMMARY, AUTOMATIC APPROACH message in dispatch, maintenance control will enter all data on a CAT II OUSD tracking spreadsheet and forward the message to the following management personnel:

1. Director of Operations (DO), Captain Boe Sharp.
2. Director of Maintenance (DOM), Ken Johnson.

   c) During each morning meeting for the duration of this OUSD, maintenance control will brief all attendees as to the current status of OUSD landings, including the following statistics:

   • Autolands attempted: previous 24 hours;
   • Satisfactory autolands: previous 24 hours;
   • Unsatisfactory autolands with preliminary reasons;
   • Total satisfactory autolands to date;
   • Total unsatisfactory autolands to date; and
   • FAA feedback, if any.

   1. Should there be any unsatisfactory autolands reported, the DOM and the DO are jointly responsible to determine whether maintenance factors, operational factors, or some combination thereof are responsible for the unsatisfactory autoland and to develop appropriate remedial procedures.

   2. Additionally, maintenance control is responsible for maintaining a current and inspectable OUSD file of all relevant email messages and B-737-700 Autoland Discrepancy Forms. This file may be maintained in electronic format or by the maintenance tracking system with scanned B-737-700 Autoland Discrepancy Forms.

   d) Form ABC OUSD-1, B-737-700 Autoland Discrepancy Form. Flightcrews will use Form ABC OUSD-1 to record all unsatisfactory autoland approaches. An unsuccessful autoland is defined as follows:

   • Aircraft fails to maintain runway track within + or − 22 feet of centerline (CL);
   • Drift rate exceeds 2 feet per second;
   • Aircraft does not touch down within the touchdown zone (TDZ);
• Autoflight system does not maintain the aircraft within required performance parameters when within the decision region; and
• Any other performance abnormality (e.g., early autoflight disconnect, failure to ALIGN, failure to FLARE, failure to RETARD autothrottles, or failure to rollout properly).

1. A logbook entry is required for any unsatisfactory autoland. Forms ABC OUSD-1, B-737-700 will be left with the aircraft logbook for scanning into the maintenance tracking system (retained for 1 year). This information will also be retrieved by the CASP and published monthly in the Fleet Maintenance CASP Report.

2. All autoflight system history is also available in the maintenance tracking system by the applicable A4A chapter.

Sample Autoland Discrepancy Form
ABC OUSD-1, B-737-700, Autoland Discrepancy Form (Front)

This form will be completed whenever an approach is attempted using the airborne low approach system, regardless of whether the approach is abandoned or concluded successfully.

CAT II/IIIa APPROACH EVALUATION

CAT II □ CAT IIIa □ Autoland Yes □ No □

Pilot in Command (PIC)________________________

Second in Command (SIC)________________________

Date __________ Registration No. ___________ Airport ID ___________

Rwy __________ Wx_________________________ Wind______________

APPROACH EVALUATION:

Was the approach successful? Yes ______ No _______

Flight control guidance system used:

Auto-coupler________________________

Flight director________________________

Airspeed at middle marker ± at _______ 100' ± _______ from programmed speed?

If unable to complete the approach, indicate the cause:

Airborne equipment □ Ground equipment □ ATC (air traffic control) □ Other □

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IDENTIFY AND DESCRIBE NATURE OF DEFICIENCY

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
See criteria on rear of this form

ABC OUSD 1, B-737-700, Autoland Discrepancy Form (Back)

AUTOLAND CRITERIA

An unsuccessful autoland is defined as follows:

1. Aircraft fails to maintain runway track within ± 22 feet of centerline (CL);
2. Drift rate exceeds 2 feet per second;
3. Aircraft does not touch down within the touchdown zone (TDZ);
4. Autoflight system does not maintain the aircraft within required performance parameters when within the decision region; and
5. Any other performance abnormality (e.g., early autoflight system disconnect, failure to ALIGN, failure to FLARE, failure to RETARD autothrottles, or failure to rollout properly).

A logbook entry is required for any unsatisfactory autoland.

e) Data Collection Requirements and Miscellaneous Considerations. Form ABC OUSD-1, B-737-700 was developed to allow the flightcrew to record unsatisfactory approach and landing performance. The resulting data and a summary of the demonstration data will be made available to the principal inspectors (PI) and regional Flight Standards division (RFSD) NextGen Branch (AXX-220) for evaluation. The data provided by Form ABC OUSD-1, B-737-700 include the following information:

1. Information regarding the inability to initiate an approach or identify deficiencies related to airborne equipment.
2. Information regarding abandoned approaches, stating the reasons the approach was abandoned and the altitude above the runway at which the approach was discontinued or at which the automatic landing system was disengaged.
3. Information regarding any system abnormalities that required manual intervention by the pilot to ensure a safe touchdown or touchdown and rollout, as appropriate.
4. Data Analysis. Unsatisfactory approaches using facilities approved for CAT II or III where landing system signal protection was provided should be fully documented. The following factors should be considered:

   a. Air Traffic Control (ATC) Factors. ATC factors that result in unsuccessful approaches should be reported. Examples include situations in which a flight is vectored too close to the final approach fix (FAF)/Final Approach Point (FAP) for adequate Localizer (LOC) and glide slope.
capture, lack of protection of ILS critical areas, or ATC requests for the flight to discontinue the approach.

b. Faulty Navigational Aid (NAVAID) Signals. NAVAID (e.g., ILS LOC) irregularities, such as those caused by other aircraft taxiing, overflying the NAVAID (antenna), or where a pattern of such faulty performance can be established should be reported.

c. Other Factors. Any other specific factors affecting the success of CAT II operations that are clearly discernible to the flightcrew should be reported. An evaluation of reports discussed above will be made to determine system suitability for authorization for CAT II operations.

5. The following precautions must be observed when conducting autolands:

a. The runway and associated instrument procedure should have no outstanding Notices to Airmen (NOTAM) or other applicable notes concerning the procedure precluding the use of the autoland system (e.g., it should not have notes such as “LOC unusable inside the threshold,” or “Glideslope unusable below xxx feet.”).

b. Suitable ILS critical area protection (or equivalent) should be requested from ATC, if applicable. Similar to precautions for a CAT II or III procedure, the crew should remain alert to detect any evidence of unsuitable system performance, whether or not critical protection is being provided.

c. Airports/runways on the CAT II/III special terrain list may not be used for initial CAT II or III autoland demonstrations. The characteristics of the prethreshold terrain or TDZ slope at these facilities may cause abnormal performance in flight control systems. Additional analysis or flight demonstrations are required for each aircraft type prior to approval of CAT II or III minimums. Should ABC Inc. intend to use autoland procedures at these specified runways, prior coordination and approval is required.

NOTE: Every demonstration autoland must be conducted in weather equal to or greater than ABC Inc.’s current CAT I operating minimums: 200 feet DA, RVR 1800.

RESERVED. Paragraphs 4-195 through 4-209.