NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.664

National Policy

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6/5/23

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6/5/24

SUBJ: Contractor-Provided One-Engine-Inoperative (OEI) Airport Obstacle Analysis

1. Purpose of This Notice. This notice provides guidance to inspectors concerning the initial approval and continuing surveillance of operator procedures in the event of an engine failure when taking off from an airport using contractor-provided one-engine-inoperative (OEI) airport obstacle analysis.

2. Audience. The primary audience for this notice is the Flight Standards Service (FS) Safety Assurance offices' aviation safety inspectors (ASI) and aviation safety technicians (AST) who conduct certification functions for pilots and/or have oversight of a designee with pilot certification authorization. Additionally, this notice should be distributed to all designees that perform these functions. The secondary audience includes the Safety Standards and Foundational Business offices.

3. Where You Can Find This Notice. You can find this notice on the MyFAA employee website at https://employees.faa.gov/tools_resources/orders_notices and the Dynamic Regulatory System (DRS) at https://drs.faa.gov. Operators and the public can find this notice on the Federal Aviation Administration's (FAA) website at https://www.faa.gov/regulations_policies/orders_notices and DRS.

4. Background. Routine surveillance of Title 14 of the Code of Federal Regulations (14 CFR) part 135 operators discovered that operators were using contractor-supplied aeronautical data for runway and airport obstacle analysis without authorization or sufficient training on the alternate procedures. The surveillance also indicated insufficient training and checking of crew proficiency in understanding and performing the procedures developed by contractor performance providers.

5. Discussion. Currently, 14 CFR part 91, § 91.175 and part 135 subpart I require part 135 operators to perform OEI airport obstacle analysis prior to operating into or out of an airport. Methods of conducting this analysis acceptable to the FAA are contained in the current edition of Advisory Circular (AC) 120-91, Airport Obstacle Analysis. This discussion focuses on using contractor-developed data to provide procedures and routes to be followed in the event of an engine failure during takeoff, following the acceptable methods and guidelines found in AC 120-91.

a. Limitations. OEI procedures are used to comply with 14 CFR part 121 subpart I and part 135 subpart I requirements. These procedures are not an alternate means of compliance with Standard Instrument Departure (SID), Obstacle Departure Procedure (ODP), and Diverse Vector Area (DVA) climb gradients and altitude requirements; SID, ODP, and DVA climb gradients and altitude requirements are based on all-engines-operating (AEO) and Terminal Instrument Procedures (TERPS) criteria. OEI requirements may not meet the requirements prescribed in TERPS. Further, compliance with TERPS AEO climb gradient requirements, even based on OEI performance, does not necessarily ensure that OEI takeoff obstacle clearance requirements are met.

b. Operation Specification (OpSpec) A009, Airport Aeronautical Data. In conjunction with the above-listed requirements, part 135 operators are currently required by 14 CFR part 119, § 119.5 to be issued OpSpecs showing company authorizations and operating limitations. OpSpec A009 covers the use of airport aeronautical data. The use of contractors, or other airport obstacle analysis systems, falls into the category of aeronautical data. This can be found in FAA Order 8900.1, Volume 3, Chapter 18, Section 3, Part A Operations Specifications—General, Paragraph 3-737, Part A Operations and Management Specifications Paragraphs. After a review of 14 CFR part 142 and Order 8900.1, Volume 4, Chapter 3, Airplane Performance and Airport Data, it is evident that there is no specific requirement or guidance for part 142 training centers to include OEI procedures training using contractor-developed procedures in their 14 CFR part 61 curricula.

6. Action. A Principal Operations Inspector (POI) should not grant an operator authorization to use a contractor's airport obstacle analysis system until the operator can successfully demonstrate that the system in place provides for adequate training of crewmembers.

a. Operator Training Program. POIs should conduct a thorough review of each affected operator's Training Manual, curriculum, standard operating procedures (SOP), and General Operations Manual (GOM) to ensure the use and implementation of contractor-provider data is adequately covered.

(1) POIs should pay special attention to ensure that, whichever system the operator requests authorization for, both ground and flight training on that particular system is specifically included in these documents. For example, if an operator requests authorization to use the iPreFlight application as their means of providing runway and airport obstacle analysis, then all of their training documents must provide for specific training on the use of iPreFlight. Specific guidance is given in Order 8900.1, Volume 3, Chapter 19, Section 3 and Sections 5 through 8, which states that aeronautical data training and OEI procedures training must be included in an operator's required training curriculum in all phases of training. These training phases include Indoctrination, Ground, Flight, Flightcrew Qualification, and Special.

(2) Further evaluation of an operator's training program should be accomplished through tabletop review, avionics setup demonstrations, proving runs, and/or pilot checking. AC 120-91, Subparagraph 18c, Validation Flights, references validation tests as a means to evaluate a particular OEI procedure that differs significantly from the AEO procedures, or if terrain makes course guidance questionable at the OEI altitudes. This validation is most easily accomplished

using a simulator. Inspectors may substantiate the requirement for evaluation using the procedures and conditions described in part 135, §§ 135.145 (when applicable) and 135.73.

(3) Flight training should include:

(a) Training to ensure that if an engine fails on takeoff in an airplane, a pilot shall avoid obstacles following the OEI alternate procedure provided by the operator;

(b) Emphasis on pilots accomplishing immediate action items;

(c) Declaring an emergency with air traffic control (ATC) as soon as practicable; and

(d) Ensuring crews advise ATC of their intentions to fly the OEI routing developed during planning. Inspectors must ensure that operators/pilots understand the instrument flight rules (IFR) departure procedure is then no longer applicable, and ATC must assist as necessary for the emergency (refer to Order 8900.1, Volume 3, Chapter 32, Section 4, General Operations Manuals for Parts 121 and 135, subparagraphs 3-3204A and B).

b. Operator Differences Training. In addition to the training requirements already stated, the operator must provide for differences training in their approved training curriculum.

(1) During the demonstrations to the POI, consideration needs to be given to multiple types and makes (e.g., Rockwell Collins, Honeywell, and Garmin) of aircraft guidance systems. Due to the large variations in guidance systems, how a contractor's data is entered into the aircraft guidance system differs widely from aircraft to aircraft. Many aircraft guidance systems do not allow for split flight management systems (FMS) operations, while others may be split (e.g., flight plan behind a flight plan, or one FMS with the SID procedure and one with the OEI procedure).

(2) Company SOPs should be developed that specifically state the procedure to follow for every avionics package involved. A briefing on how these SOPs will be executed should be performed prior to every departure requiring nonstandard crew interaction and/or complex avionics manipulation (e.g., split FMS operations). Refer to Order 8900.1, Volume 4, Chapter 3, Section 3, Safety Assurance System: Approval of Performance Data Sections of CFMs and/or Data Provided via Other Means, Paragraph 4-551, Evaluation of an Operator's System, for further guidance on evaluation of an operator's airplane performance system. This standardization will provide for less confusion on the part of the crew in the event of an engine failure. Both ground and flight differences training on individual avionics packages must be shown during the demonstrations, as required by part 135 subpart H. Further explanation is given in Order 8900.1, Volume 3, Chapter 19, Section 9, Safety Assurance System: Differences Training—All Training Categories, Paragraph 3-1311, General.

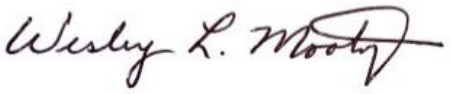
c. Summary. POIs should review whether their part 135 operators fall into one of the categories requiring the use of airport obstacle analysis as stated by part 135 subpart I. If the POI determines the operator requires the use of airport obstacle analysis, the POI should notify the operator of this requirement and the need to be authorized under OpSpec A009. Advise the operator of AC 120-91 as a means of compliance.

(1) An operator not authorized under OpSpec A009 must immediately make the appropriate changes required and submit them to the POI for approval.

(2) If already authorized, an assessment should be made of the operator's manuals and training program to ensure the use of contractors (or other programs) is adequately covered. Appropriate revisions should be submitted and approved to cover this topic.

(3) Regardless of whether or not the operator was previously authorized to use contractor-developed performance data, an inspection should be carried out to ensure all crewmembers have proper training and knowledge in the use of the contractor's data or other airport obstacle analysis program. Training Center Program Managers (TCPM) should ensure their core curricula, specialty curricula, and other curricula provide a complete level of training to pilots. While this notice focuses on part 135 operators, parts 91 and 121 operators are encouraged to follow the action items in this paragraph.

7. Disposition. We will incorporate the information in this notice into Order 8900.1, Volume 4, Chapter 3, Section 3 before this notice expires. Direct questions or comments concerning the application of performance data and procedures to the Flight Technologies and Procedures Division (AFS-400) at 202-267-8795. Direct questions on policies and procedures related to training and qualification under parts 121, 135, and 142 to the Air Transportation Division (AFS-200) at 202-267-8166.



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