- (2) Definition of process related roles and responsibilities.
- (3) Procedure for validation of process of process elements.
- (i) Indications of process stability/reliability.
- (ii) Parameters to validate process and monitor (measure) success.
- (iii) Duration of necessary evaluation to validate process.
- (4) Procedure for follow-up inservice monitoring to assure process remains reliable/stable.

Methods of process validation are provided in paragraph 7.

## 4. ETOPS Processes

- a. The two-engine airframe/engine combination for which the operator is seeking Accelerated ETOPS Operational Approval must be ETOPS Type Design approved prior to commencing ETOPS. The operator seeking Accelerated ETOPS Operational Approval must demonstrate to the FAA that it has an ETOPS program in place that addresses the process elements identified in this section.
- b. The following are the ETOPS process elements:
- (1) Airplane/engine compliance to Type Design Build Standard (CMP).

(2) Compliance with the Maintenance Requirements as defined in paragraph 10 and Appendix 4 of AC 120–42A:

- (i) Fully developed Maintenance Program (Appendix 4, paragraph 1(a)(2)) which includes a tracking and control program.
- (ii) ETOPS manual (Appendix 4, paragraph 1(a)(3)) in place.
- (iii) A proven Oil Consumption Monitoring Program. (Appendix 4, paragraph 1(a)(5)).

(iv) A proven Engine Condition Monitoring and Reporting system. (Appendix 4, paragraph 1(a)(5)).

(v) A proven plan for Resolution of Airplane Discrepancies. (Appendix 4, paragraph 1(a)(6)).

(vi) A proven ETOPS Reliability Program. (Appendix 4, paragraph 1(a)(7)).

(vii) Propulsion system monitoring program (Appendix 4, paragraph 1 (a)(8)) in place. The operator should establish a program that results in a high degree of confidence that the propulsion system reliability appropriate to the ETOPS diversion time would be maintained.

(viii) Training and qualifications program in place for ETOPS maintenance personnel. (Appendix 4, paragraph 1(a)(9)).

(ix) Established ETOPS parts control program (Appendix 4, paragraph 1(a)(10)).

(3) Compliance with the Flight Operations Program as defined in

- paragraph 10 and Appendix 5 of AC 120–42A:
- (i) Proven flight planning and dispatch programs appropriate to ETOPS.
- (ii) Availability of meteorological information and MEL appropriate to ETOPS.
- (iii) Initial and recurrent training and checking program in place for ETOPS flight operations personnel.
- (iv) Flight crew and dispatch personnel familiarity assured with the ETOPS routes to be flown; in particular the requirements for, and selection of, enroute alternates.
- (4) Documentation of the following elements:
- (i) Technology new to the operator and significant difference in primary and secondary power (engines, electrical, hydraulic and pneumatic) systems between the airplanes currently operated and the two-engine airplane for which the operator is seeking Accelerated ETOPS Operational Approval.
- (ii) The plan to train the flight and maintenance personnel to the differences identified in paragraph 1 above.
- (iii) The plan to use proven validated Training and Maintenance and Operations Manual procedures relevant to ETOPS for the two-engine airplane for which the operator is seeking Accelerated ETOPS Operational Approval.
- (iv) Changes to any previously proven validated Training, Maintenance, or Operations Manual procedures described above. Depending on the nature and extent of any changes, the operator may be required to provide a plan for validating such changes.

(v) The validation plan for any additional operator unique training and procedures relevant to ETOPS.

(vi) Details of any ETOPS program support from the airframe manufacturer, engine manufacturer, other operators or any other outside person.

(vii) The control procedures when maintenance or flight dispatch support is provided by an outside person as described above.

## 5. Application

a. Paragraph 10(a) of AC 120–42A requires that requests for extended range operations be submitted at least sixty (60) days prior to the start of extended range operations. Normally, the operator should submit an Accelerated ETOPS Operational Approval Plan to the FAA six (6) months before the proposed start of extended range operations. This time will permit the FAA to review the documented plans and assure adequate

- ETOPS processes are in place. The operators application for Accelerated ETOPS should:
- (1) Define proposed routes and the ETOPS diversion time necessary to support these routes.
- (2) Define processes and related resources being allocated to initiate and sustain ETOPS operations in a manner that demonstrates commitment by management and all personnel involved in ETOPS maintenance and operational support.
- (3) Identify, where required, the plan for establishing compliance with the build standard required for Type Design Approval, e.g., CMP (Configuration, Maintenance and Procedures Document) compliance.

(4) Document plan for compliance with requirements in paragraph 4.

(5) Define Review Gates. A Review Gate is a milestone tracking plan to allow for the orderly tracking and documentation of specific requirements of this Appendix. Each Review Gate should be defined in terms of the tasks to be satisfactorily accomplished in order for it to be successfully passed. Items for which the FAA visibility is required or the FAA approval is sought should be included in the Review Gates. Normally, the Review Gate process will start six (6) months before the proposed start of extended range operations and should continue at least until six (6) months after the start of extended range operations. Assure that the proven processes comply with the provisions of paragraph 3 of this Appendix.

## 6. Operational Approvals

- a. Operational approvals that are granted with reduced inservice experience will be limited to those areas agreed on by the FAA at approval of the Accelerated ETOPS Operational Approval Plan. When an operator wishes to add new areas to the approved list, FAA concurrence is required.
- b. Operators will be eligible for ETOPS Operational Approval up to the Type Design Approval limit, provided the operator complies with all the requirements in paragraph 4.

## 7. Process Validation

- a. Paragraph 4 identifies those process elements that need to be proven prior to start of Accelerated ETOPS.
- b. For a process to be considered proven, the process must first be defined. Typically this will include a flow chart showing the various elements of the process. Roles and responsibilities of the personnel who will be managing this process should be defined including any training requirement. The operator should