Advisory Circular

Subject: ADVANCED QUALIFICATION PROGRAM | **Date:** 6/23/06 | **AC No:** 120-54A
Initiated by: AFS-230

1. PURPOSE. This advisory circular (AC) provides the Federal Aviation Administration (FAA) guidance for approval of an Advanced Qualification Program (AQP) under AQP regulatory guidance (AQP guidance is provided in Title 14 of the Code of Federal Regulations (14 CFR) part 121, subpart Y, or in a subsequent regulation that supersedes it). AQP is a systematic methodology for developing the content of training programs for air carrier crewmembers and dispatchers. It replaces programmed hours with proficiency-based training and evaluation derived from a detailed job task analysis that includes crew resource management (CRM). AQP incorporates data-driven quality control processes for validating and maintaining the effectiveness of curriculum content. AQP provides an alternate method of qualifying and certifying, if required, pilots, flight engineers, flight attendants, aircraft dispatchers, instructors, evaluators, and other operations personnel subject to the training and evaluation requirements of 14 CFR parts 121 and 135. The AQP encourages innovation in the methods and technology that are used during instruction and evaluation, and efficient management of training systems. The goal of AQP is to achieve the highest possible standard of individual and crew performance. A leading objective of AQP is to provide effective training that will enhance professional qualifications to a level above the present standards that are provided in parts 121 and 135.

> **NOTE: The methods and procedures in this AC describe one acceptable means of compliance. Alternate means are encouraged and will be evaluated on their merit.**

2. CANCELLATION. AC 120-54, Advanced Qualification Program, dated August 9, 1991, is canceled.

3. RELATED 14 CFR PARTS.

a. Part 121, Operating Requirements: Domestic, Flag, and Supplemental Operations.

b. Part 135, Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons on Board Such Aircraft.

c. SFAR 58, Advanced Qualification Program.

d. Part 142, Training Centers.

e. Part 119, Certification: Air Carriers and Commercial Operators.

4. BACKGROUND. The capabilities and use of simulators and other computer-based training devices in training and qualification activities have changed dramatically. AQP regulatory guidance and this AC allow certificate holders that are subject to the training and evaluation requirements of part 121 and part 135 to develop innovative training and qualification programs that incorporate the most recent advances in training methods and techniques. AQP regulatory guidance and this AC also apply to training centers under 14 CFR part 142 that intend to provide training for eligible certificate holders. AQP emphasizes crew-oriented training and evaluation. These training and evaluation applications are now grouped under the general term of line operational simulations (LOS), including line oriented flight training (LOFT), special purpose operational training (SPOT), and line operational evaluation (LOE). Due to the role of CRM issues in fatal accidents, it has become evident that training curriculums should develop and evaluate both technical and CRM skills. In AQP, a structured LOS design process is employed to specify and integrate the required CRM and technical skills into LOS scenarios.

a. History. In 1975, the FAA began to deal with two issues: hardware requirements needed for total simulation, and the redesign of training programs to deal with increasingly complex human factors problems. At the urging of the air transportation industry, the FAA addressed the hardware issue first. This effort culminated in 1980 in the development of the Advanced Simulation Program. Since then, the FAA has continued to pursue approaches for the redesign of training programs to increase the benefits of Advanced Simulation and to deal with the increasing complexity of cockpit human factors.

b. Joint Government-Industry Task Force. On August 27, 1987, FAA Administrator T. Alan McArtor addressed representatives from major air carriers and air carrier associations, flight crewmember associations, commuter air carriers and regional airline associations, manufacturers, and government organizations. One of the issues discussed at the meeting focused on flight crewmember performance. This meeting led to the creation of the Joint Government-Industry Task Force on Flightcrew Performance. On September 10, 1987, the task force met at the Air Transport Association's (ATA) headquarters to identify and discuss flight crewmember performance issues. Working groups in three major areas were formed: (1) man/machine interface; (2) flight crewmember training; and (3) operating environment. Each working group submitted a report and recommendations to the joint task force. On June 8, 1988, the recommendations of the joint task force were presented to Administrator McArtor. The major substantive recommendations to the Administrator from the flight crewmember training group were the following:

(1) Require part 135 commuters (whose airplane operations require two pilots) to comply with part 121 training, evaluation, qualification, and recordkeeping requirements (14 CFR part 119).

(2) Provide for an SFAR and AC to permit development of innovative training programs (SFAR 58).

(3) Establish an FAA national air carrier training program office that provides training program oversight at the national level (Air Carrier Training Branch, AFS-210, Voluntary Safety Programs Branch, AFS-230).

(4) Require seconds-in-command (SIC) to satisfactorily perform their duties under the supervision of check airmen during operating experience (part 121, section 121.434(c)(2)).

(5) Require all training to be accomplished through a certificate holder's training program.

(6) Provide for approval of training programs based on course content and training aids rather than specified programmed hours (SFAR 58).

(7) Require Cockpit Resource Management (section 121.404)(SFAR 58) training and encourage greater use of LOFT (section 121.409) (SFAR 58).

c. National Transportation Safety Board (NTSB). In June of 1988, the NTSB issued a Safety Recommendation (A-88-71) on the subject of CRM training. The recommendation was that all part 121 carriers review initial and recurrent flightcrew training programs. The purpose of this review was to ensure that the training programs include simulator or aircraft training exercises that involve cockpit resource management and active coordination of all crewmember trainees, and which permits evaluation of crew performance and adherence to those crew coordination procedures.

d. Part 121 subpart Y. In response to the recommendations from the joint task force and from the NTSB, the FAA, on October 2, 1990, published SFAR 58, which addresses the majority of the above recommendations. Part 121 subpart Y was released on October 1, 2005. AQP was also established to permit a greater degree of regulatory flexibility in the approval of innovative pilot training programs. Based on a documented analysis of operational requirements, a certificate-holder under AQP may propose to depart from traditional practices with respect to what, how, when, and where training and testing is conducted. This is subject to FAA approval of the specific content of each proposed program. Part 121 subpart Y requires that all departures from traditional regulatory requirements be documented and based upon an approved continuing data collection process sufficient to establish at least an equivalent level of safety. AQP provides a systematic basis for matching technology to training requirements and for approving a training program with content based on relevance to operational performance. An applicant may propose to replace certain requirements of 14 CFR parts 61, 63, 65, 121, or 135, with an AQP curriculum, subject to FAA approval. An AQP may also employ substitutes for the practical test requirements. Each requirement of parts 61, 63, 65, 121, 135 or the practical test standards (PTS) that is not specifically addressed in an approved AQP curriculum continues to apply to the certificate holder.

5. BENEFITS OF AQP. Although AQP is a voluntary program, the FAA Flight Standards Service encourages air carriers to participate. AQP provides for enhanced curriculum development and a data-driven approach to quality assurance along with the flexibility to target critical tasks during aircrew training. The AQP methodology directly supports the FAA's goals for safety enhancement. The primary goal of AQP is to achieve the highest possible standard of

individual and crew performance. In order to achieve this goal, AQP seeks to reduce the probability of crew-related errors by aligning training and evaluation requirements more closely with the known causes of human error. For example:

a. Crew Performance. Most accidents are attributed to crew error. Traditional training programs focus on individual training and evaluation. Under AQP, the focus is on crew and individual performance in both training and evaluation.

b. CRM. Most accidents are caused by errors of judgment, communication, and crew coordination. Traditional training programs focus primarily on flying skills and systems knowledge. Under AQP, competence in flying skills and systems knowledge are integrated with CRM skills in training and evaluation throughout the curriculum.

c. Scenario-Based Training and Evaluation. Most accidents are caused by a chain of errors that build up over the course of a flight and which, if undetected or unresolved, result in a final, fatal error. Traditional training programs, with their maneuver-based training and evaluation, artificially segment simulation events in such a way as to prevent the realistic build-up of the error chain. Under AQP, both training and evaluation are scenario-based, simulating more closely the actual flight conditions known to cause most fatal carrier accidents.

d. Additional Benefits. Added benefits that are expected for individual applicants will vary, but may include:

(1) The ability to modify training curricula, media, and intervals.

(2) Crew evaluation as well as individual assessment.

(3) Improved standardization across fleets and flight personnel.

(4) Shift from programmed hours to proficiency-based training.

(5) Access to innovative training ideas and research.

(6) Opportunity to achieve more efficient training.

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CHAPTER 1. AQP OVERVIEW

1-1. GENERAL. The Advanced Qualification program (AQP) integrates a number of training and evaluation features aimed at improving performance. AQPs are systematically developed, continuously maintained, and empirically validated proficiency-based training systems. They allow for the systematic analysis, design, development, implementation, evaluation, and maintenance of self-correcting training programs.

a. Phases of Development. There are five phases for developing, implementing, and maintaining an AQP. A description of each phase is located in Chapter 2. Each phase must be Federal Aviation Administration (FAA)-approved before the applicant may proceed to the next phase. Each phase consists of specific activities, including the documentation of those activities. These documents must also be FAA-approved.

b. AQP Documentation. In addition to the supporting documents and manuals provided to the FAA in traditional training programs, there are six documents and an annual report requirement that is unique to AQP. The documents are instrumental in managing the AQP and must be maintained throughout the life of the program. The documents can be categorized in two groups, by their function and interrelationship: management and database. The documents, along with the annual report, comprise the Program Audit Database (PADB).

(1) Management Documents. These documents include the Application, Instructional Systems Development Methodology, and Implementation and Operations Plan. These documents are stand-alone in that a change in one will not necessitate a change in another.

(2) Database Documents. These documents include the Task Analysis, Qualification Standards, and Curriculum Outlines. Because a change to one often means a change to the others, it is recommended that they be maintained in an interactive database.

(3) Annual Report. The purpose of the report is to identify changes to the curriculums, training equipment upgrades, and the AQP Maintenance Strategy resulting from feedback and analysis of the information in the Performance/Proficiency Database (PPDB). Details of the report are found in Chapter 2, section 6, phase V: Continuing Operations.

1-2. AQP OBJECTIVES.

a. Support safe operations by continuously improving training and evaluation.

b. Remain responsive to continuing changes in the industry, including new aircraft technology, changing operational environments, and new training methods and equipment.

c. Remain responsive to continuing changes and best practices relative to training and evaluation.

1-3. AQP CHARACTERISTICS.

a. Participation is voluntary.

b. Employs innovative training and qualification concepts with the regulatory flexibility to tailor training to individual company circumstances.

c. Uses performance data to drive curriculum changes.

d. Qualification is based on individual and team performance, using progressive evaluations of proficiency objectives, and the structure and maintenance of all elements (curriculum, facilities, training equipment, instructors, evaluators, courseware, and quality assurance) of the program.

e. Data collection and analysis to empirically validate individual and team proficiency, and the AQP itself.

f. Training is systematically developed with an audit trail for all training and data requirements.

1-4. EQUIVALENT LEVEL OF SAFETY AND AQP REQUIREMENTS.

NOTE: AQP is a voluntary program that entails a strong commitment from the air carrier to exceed minimum training standards in the greater interest of safety. To determine an equivalent level of safety of an airline's AQP, the entire training system must be examined as a comprehensive whole rather than considering any one component in isolation. To ensure that the AQP does establish an initial justification and a continuing process to show an equivalent level of safety, mandatory requirements have been established.

Under an AQP, the FAA monitors the process as well as the product. Instead of basing curriculums on prescribed generic maneuvers, procedures and knowledge items, AQP curriculums are based on a detailed analysis of the specific job tasks, knowledge, and skill requirements of each duty position for the individual airline. Compared to traditional training programs, the AQP process provides a systematic basis for establishing an audit trail between training requirements and training methodologies.

AQPs are systematically developed, continuously maintained, and empirically validated, proficiency-based training systems. They allow for the systematic analysis, design, development, implementation, progressive evaluation, and maintenance of self-correcting training programs that include integrated CRM, improved instructor/evaluator standardization, scenario-based evaluation, and a comprehensive data-driven quality assurance system.

a. Comply with all aspects of the approved AQP.

b. The processes used for development, implementation and maintenance of program operations will be continued throughout the life of the program.

c. Accommodate make, model, and series aircraft (or variant).

d. May build upon an existing training program or be completely new.

e. Provide three basic types of curriculums for every duty position; indoctrination (for new hires, new instructors, and new evaluators); qualification; and continuing qualification (see Figure 3-6). Specialty curriculums (transition, upgrade, requalification, refresher, etc.) will be derivatives from these basic types.

f. Duty positions to be covered must include all flight crewmember positions, instructors, and evaluators, and may include other positions, such as flight attendants, aircraft dispatchers, and other operations personnel.

g. Provide satisfactory justification to the FAA that the proficiency-based qualification of personnel under AQP meets or exceeds existing part 121 and/or part 135 standards.

h. Each applicable requirement of the PTS and part 61, 63, 65, 121, or 135 that is not specifically addressed in the AQP continues to apply to the certificate holder.

i. Document the requirements of the PTS and part 61, 63, 65, 121, or 135, as applicable, which would be replaced by an AQP curriculum.

j. The certificate holder must establish an initial justification and a continuing process to show how the AQP curriculum provides an equivalent level of safety for each requirement to be replaced.

k. Any training or evaluation that is satisfactorily completed in the calendar-month before or the calendar-month after the calendar-month in which it is due is considered to have been completed in the calendar-month it was due.

l. Curriculums must be based on an instructional systems development methodology. This methodology must incorporate a thorough analysis of the certificate holder’s operations, aircraft, line environment and job functions.

m. A list of, and text describing, the knowledge requirements, subject materials, job skills, and qualification standards of each task to be trained and evaluated.

n. A list of, and text describing, supervised operating experience, evaluation/remediation strategies, provisions for special tracking, and how recency of experience requirements will be accomplished.

o. All curriculums will include planned (not programmed) hours for ground training, flight training, evaluation, and operating experience.

p. Qualification and continuing qualification curriculums must integrate the training and evaluation of CRM/DRM and technical skills and knowledge.

q. Include line operational training (e.g., full crew LOS).

r. Use LOE or an equivalent evaluation under an AQP acceptable to the FAA for proficiency evaluations.

> **NOTE: Regardless of number of events sets, a crash (i.e., unsafe individual or crew performance that would result in significant damage, hull loss, or loss of life) during an LOE constitutes a failure of the LOE.**

s. Integrate appropriate advanced flight training equipment. Flight-training devices and simulators will be used to support scenario-based training as appropriate.

t. Develop data collection and analysis processes in order to obtain performance information on crewmembers, dispatchers, instructors, evaluators, and other operations personnel that will enable the certificate holder and the FAA to determine whether the form and content of training and evaluation activities are satisfactorily accomplishing the overall objectives of the curriculum.

> **NOTE: The Voluntary Safety Programs (VSP) Branch, AFS-230, uses de-identified data for program monitoring not to monitor individual crewmember, dispatcher or other operations personnel.**

u. Provide a Master AQP Transition Schedule (MATS) that provides a plan to transition from a traditional program to an AQP. In addition, the MATS should include a plan on how the applicant would return to a traditional program if that becomes necessary or desirable at some later date. This is not to imply that the traditional program must be kept current once AQP is entered, but only how the applicant would update the program and the timeframe needed for implementation.

1-5. DEVELOPMENTAL ASSISTANCE AND SUPPORT. Applicants may avail themselves of a wide range of support organizations, documents and services in the development of their AQPs. There is considerable support available from government and non-government sources. The total inventory of such support is constantly increasing, and the latest versions of all such support resources are always available by contacting AFS-230. The following is available directly from the FAA:

a. Flight Standards. AFS-230 is the primary support available to all AQP applicants and participants. This office includes a manager, aviation safety inspectors (ASI), instructional systems development specialists, and data management specialists dedicated to the support of AQP programs. This office works in conjunction with the principal operations inspector (POI)

and other FAA personnel to transition applicants into AQP and to maintain the quality of those programs following full implementation.

(1) Role of The FAA VSP Manager. The FAA VSP manager (AFS-230) is the person responsible for ensuring that the regulatory requirements for AQP are met and approved AQP standards are maintained. In this capacity, the FAA VSP manager provides oversight of the AQP process and documentation through all phases. The manager will also chair the AQP Extended Review Team (ERT). The manager will retain a quality assurance role and coordinate with the POI any modifications and subsequent approvals throughout the AQP's lifetime.

(2) Role of the POI. The POI is responsible for ensuring that AQP regulatory requirements are met and, that through surveillance, the AQP provides a satisfactory level of safety and airman competence. The POI will provide oversight of the Instructor/Evaluator program and adherence to approved documentation for all AQP curricula. The POI will coordinate with the Manager of Voluntary Safety Programs any modifications and subsequent approvals throughout the AQP's lifetime.

(3) ERT. The review and surveillance of an AQP prior to final approval is equivalent to a recertification of the applicants' entire training program. To ensure maintaining an effective and standardized process, the FAA AQP Manager will lead a team to conduct the review and certification of the AQP. The ERT will also include (but not necessarily be limited to) the following:

(a) The POI (or a designated representative).

(b) Training Center Program manager (TCPM, if applicable).

(c) The assigned aircrew program manager (APM) (if any).

(d) An AFS-230 ASI staff specialist.

(e) A cabin safety inspector (if required).

(f) A dispatcher (if required).

(g) An instructional system design specialist.

(h) A data management specialist.

NOTE: Additional technical personnel can be added to the ERT as required in specific areas of expertise. These would include the focal point, a member of the Flight Standards Board (FSB) or Flight Operations Evaluation Board (FOEB), as appropriate.

b. Technology Support. AFS-230 includes a technology staff assigned to enhance the effectiveness of the program through the development of Web sites, databases, collaboration techniques, software training and installation, and other support.

c. Other Resources. The following list (Figure 1-1) provides samples of the types of resources available:

FIGURE 1-1.
OTHER RESOURCES

AQP Web sites:
http://www.faa.gov/education_research/training/aqp/ (public access)
FAA Resources:
• Title 14 CFR part 121,subpart Y: Advanced Qualification Program
FAA Advisory Circulars:
AC 120-35, Line Operational Simulations (as amended)
AC 120-40, Airplane Simulator Qualification (as amended)
AC 120-45, Airplane Flight Training Device Qualification (as amended)
AC 120-46, Use of Airplane Flight Training Devices (as amended)
AC 120-51, Crew Resource Management Training (as amended)
ATA AQP Working Group: Focus Group Reports:
• Line Operational Simulations: LOFT Scenario Design, Conduct and Validation
• Advanced Qualification Program Instructor/Evaluator Task Analysis
• Applied ISD in AQP Development: Front End Analysis
• Advanced Qualification Program Data Management Guide, Second Release
AQP Software Tools:
• RRLOE: Rapidly Reconfigurable Even Set-Based Line Operational Evaluation Software [LOS Scenario-building software toolkit]
• Proteus Database [AQP curriculum & documentation-building software toolkit: AQP in a box]
• Rater Calibration Software Tools [Measures and assesses reliability across evaluators]
• Inter Rater Reliability Assessment Toolkit (workbook & diskette)
• Instructor Evaluator Training & Calibration (IETC) Toolkit
AQP Research Products:
• Developing Advanced Crew Resource Management (ACRM) Training: A Training manual
• Developing Operating Documents: A Manual of Guidelines (on CD)
• Facilitating LOS Debriefings: A Training Manual
AFS-230 Products:
• Advanced Qualification Program Overview, powerpoint briefing (as amended)
• Advanced Qualification Program (AQP) Inspector Training (Student Guide, Leader Guide, Reference Book, Lab Book, Slides)
• Overview of the Advanced Qualification Program (by T. Longridge)
• Data Analysis and Reporting Tool (DART)
• Data Cleaner (used in conjunction with DART)
Generic Documents:
• Generic AQP Application
• Generic Single Visit Training Program Application
• Generic Single Visit Training Plan
• Generic Pilot Job Task List
• Generic Pilot Job Task Analysis
• Generic Flight Attendant Job Task List
• Generic Curriculum Development Methodology Document

FIGURE 1-1.
OTHER RESOURCES (Continued)

Research Papers:
• Scientific Evaluation of Aircrew Performance
• Application of Psychometrics to the Calibration of Air Carrier Evaluators [with UNM]
• Data Warehousing for AQP Databases
• Prototype AQP Data Analysis Process
• Training for Inter-Rater Reliability: Baselines & Benchmarks
• Line Operational Evaluation (LOE) Air Carrier Scenario Based Evaluation
• Performance Measurement Issues and the AQP Database Design
• Skills Development and Assessment in the AQP Environment
• The Importance of Quality Data In Evaluating Aircrew Performance
• Questions Your Database Should Address
• A Guide to the Evaluation Aspects of Entering AQP
• Predicting Behavioral Grades from Physical Flight Data for Rejected Takeoff
• Inferential Statistics and Sample Size: Applications to Air Carrier Training and Assessment
• Initiatives Towards More Affordable Flight Simulators for U.S. Commuter Airline Training
• Simulator Fidelity Requirements: The Case of Platform Motion
• Simulator Platform Motion -- The Need Revisited
• Simulator Fidelity: The Effect of Platform Motion
• Relationship Between Objective Measures of Pilot Performance/Behavior and Instructor Grades
• The Effect of Simulator Motion on Pilot Training and Evaluation
• Realistic Radio communications in Pilot Simulator Training
• Air Traffic Control in Airline Pilot Simulator
• Rapidly Reconfigurable Event Set-Based Line Operational Evaluation Scenarios
• Do Three Easy Tasks Make One Difficult One? Studying the Perceived Difficulty of Simulator Scenarios
• Differences in General and Commercial Aviation Automation
• An Information-Processing Model Approach to Identifying Training Issues for Advanced Aviation Automation
• Do Pilots Know How They Manually Control the Vertical Flight Path?
• CRM in the Model AQP: A Preview
• The Use of ASRS Incident Reports in AQP CRM Training
• The Model AQP Database Process: Challenges in Process and Design
• AQPing CRM
• Implementing the Model AQP Database: Lessons Learned
• Data Collection and Analysis: The Next AQP Frontier
• Reconceptualizing Leadership and Followership for Event-Based Training
Research Integrations:
• Training Approaches and Considerations For Automated Aircraft: A Summary of Training Development Experiences

CHAPTER 2. AQP DEVELOPMENT PHASES

SECTION 1. INTRODUCTION

2-1. PHASES. The development of an Advanced Qualification Program (AQP) is a five-phase process. This process provides a structured building-block approach to program development. This approach results in a program with fully documented curriculums, supporting rationale, and development methodology. The use of this standardized AQP development process, along with its documentation requirements, allows an AQP applicant to develop training and evaluation programs based on analyzed and justifiable requirements. The documentation from this five-phase process will then serve as the regulatory basis for promulgating the AQP-developed training and evaluation programs. Each phase is approved sequentially. Each phase consists of specific activities, including the documentation of those activities. These documents must also be FAA-approved. An applicant cannot exercise any training and evaluation provisions permitted in phases III, IV, or V, respectively, until each preceding phase is completed and approved by the FAA Extended Review Team (ERT) (see Figure 2-1).

2-2. INSTRUCTIONAL SYSTEMS DEVELOPMENT (ISD). The FAA has incorporated the use of the systematic methodology known as ISD into the AQP process. Applicants may employ any of a wide range of current ISD models or customize their own approaches to curriculum development. This chapter provides one acceptable methodology, but applicants are encouraged to be creative in tailoring their own ISD approach to their requirements, subject to FAA approval. Innovation and practical application may result in equally acceptable AQPs. Because some ISD models are far more complex than others, the FAA has found it useful to define its minimal ISD requirements. These are:

a. Develop a job task listing.

b. Analyze that listing to determine essential skill and knowledge requirements (either directly or by reference).

c. Determine which skill and knowledge requirements must be trained/tested.

d. Develop proficiency objectives that capture all training requirements.

e. Develop qualification standards that define acceptable operational performance levels.

f. Develop tests that measure proficiency in skill and knowledge areas.

g. Provide instructional programs that teach and test training requirements.

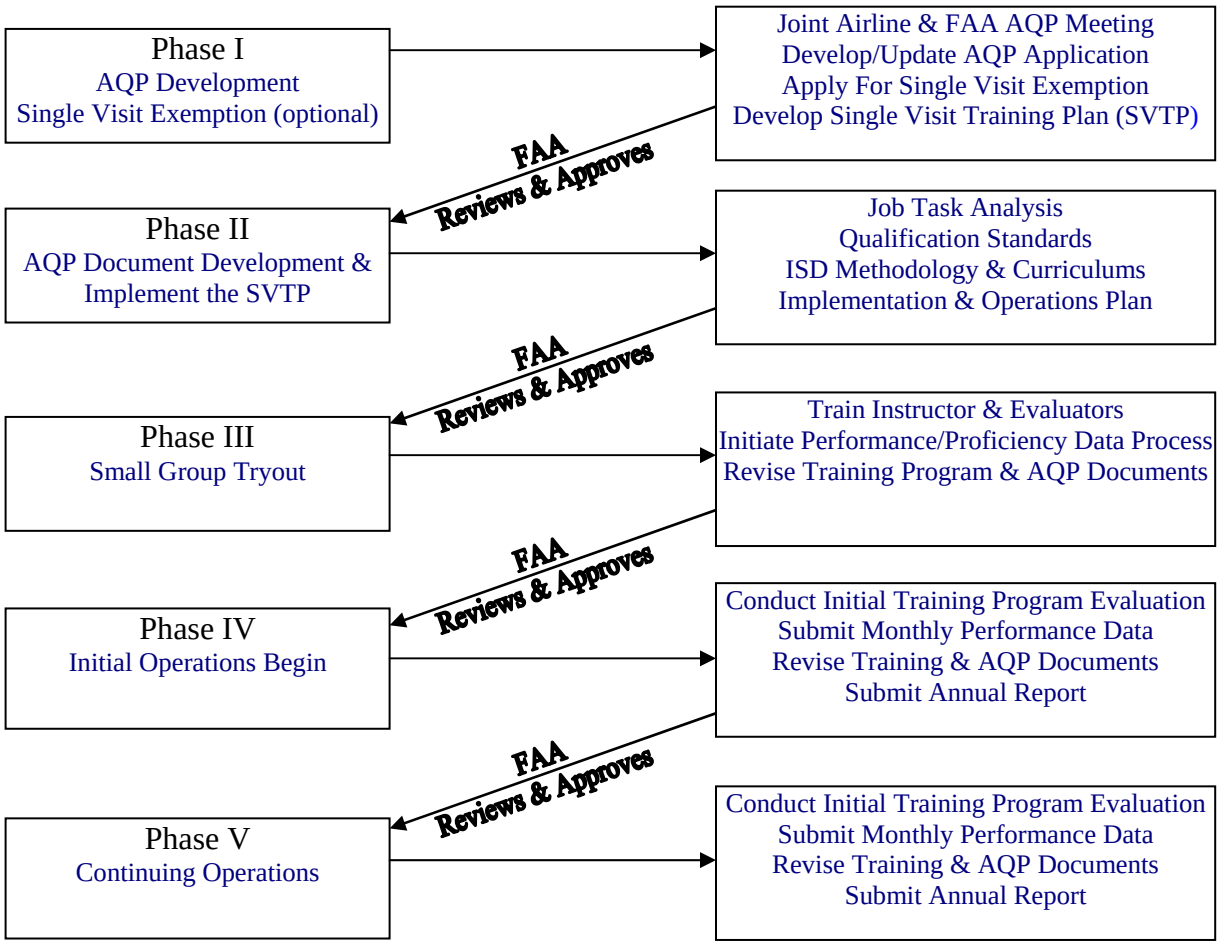
h. Establish and maintain an audit trail of explicit links between task requirements, training requirements, training and evaluation activities, and evaluation results.

i. Measure student performance against proficiency objectives and qualification standards for all curriculums.

j. Revise the training program based on student performance levels on an ongoing basis. This de-identified data (stored in the Performance/Proficiency Database) will be collected and reported to the FAA on a regular basis.

2-3. TRAINING SYSTEMS. While all applicants must meet the minimum requirements of the ISD approach, the amount of effort each applicant should put into each step of their training analysis and development depends on a number of factors. Applicants may use the ISD process to build complete training systems from the ground up, to build a proficiency-based quality control shell around an existing training system, or to make minor modifications to existing proficiency-based curriculums. Building a training system from the ground up for a new aircraft will require far more depth of analysis and development than merely modifying a current curriculum for an existing aircraft.

FIGURE 2-1.
AQP PHASE DEVELOPMENT PROCESS



SECTION 2. PHASE I: APPLICATION

2-4. JOINT MEETING. AQP begins with a letter from the applicant, to the principal operations inspector (POI), a duplicate copy of which is forwarded to the FAA manager of the

Voluntary Safety Programs (VSP) Branch, AFS-230, stating their intent to develop an AQP. The FAA VSP manager will discuss the applicant's plans with the POI. The FAA VSP manager will respond to the certificate holder, through the POI, with a Letter of Acknowledgment requesting a meeting with representatives of the certificate holder, the FAA VSP manager, and the certificate holding district office's (CHDO) inspectors responsible for oversight. The CHDO inspectors should include the POI or the inspector assigned to be the point of contact for AQP development. If the applicant is a training center, a Training Center Program Manager (TCPM) would represent the CHDO. The focus of this meeting is to ensure that all parties understand AQP, specifically the responsibilities and the commitment needed to complete the project. Discussions will include the anticipated benefits of AQP, AQP entry and exit strategies, the development process requirements, possible problem areas, and available tools. Notification of entry into AQP Phase I, Application Development, will be by letter from the FAA VSP manager to the applicant through the POI.

2-5. THE AQP APPLICATION. The purpose of the application is to provide an overview of the applicant's plan for developing an AQP for all of its fleets, instructors and evaluators, and for non-fleet specific curriculum (i.e., indoctrination). The application is submitted once and is updated as information in the application warrants changing (e.g., a change in the schedule, adding new aircraft, initiating flight attendant or dispatcher AQP programs, etc.). To establish the applicant's intent and approach for developing an AQP, the application should address thoroughly the following topics:

a. Letter of Application (See Appendix 2). The letter should clearly state the certificate holder's intent to develop, implement, and operate an AQP.

b. Data Collection, Submission and Analysis Reporting. The AQP applicant must acknowledge their understanding and acceptance of the AQP Performance Data requirements as defined in Chapter 8 of this advisory circular (AC).

c. Operating Environment Description. Applicants should describe their operating environment, including the general physical environmental factors expected to be encountered in operations. Environmental factors are critical to development of line operational simulation (LOS) scenarios and meaningful proficiency objectives. Environmental factors include:

(1) Weather norms and extremes.

(2) Normal, abnormal and emergency equipment operation.

(3) Geographic areas of operations.

d. Training Equipment Description and Location. The application should describe the training equipment, its location, and the organization responsible for its security and maintenance. If the type of training equipment for the AQP is not known at the time the application is submitted, the application will be updated when the training equipment requirements are identified. The FAA identification number assigned by the National Simulator Program manager and the level of qualification identifies flight simulators and/or flight training

devices. Other training devices will be listed and if qualification is required, the applicant should state when it intends to submit a test guide and a request for equipment qualification.

e. Facilities Description. Each AQP submission should describe the facilities the applicant intends to use. The description should include the location, type of facility, classrooms, training aids, courseware, and other features that contribute to creating and maintaining a positive learning environment.

f. Trainee Demographics. The application should provide a summary of demographic data on the experience level of the pilots, flight engineers, flight attendants, and dispatchers that will be trained under AQP. This data includes the current ground and flight instructors and evaluators that are expected to continue these functions under AQP. For each fleet, this information would identify the:

(1) Entry requirements for ground and flight instructors and evaluators.

(2) Entry requirements for new hires.

(3) Students should be identified as a group in terms of previous experience.

(4) Current and anticipated need for replacement crewmembers by duty position.

g. AQP Organization. This section explains the organizational resources that the air carrier plans to employ for AQP development. Generally, an AQP applicant's staff should support the following functions:

(1) AQP Coordination. The company focal point for the AQP development effort. Responsible for AQP leadership and is the primary contact with the FAA and any other external organizations that may impact the applicant's AQP. This position should be filled with an individual who understands job task analysis and the training requirements of Title 14 of the Code of Federal Regulations (14 CFR).

(2) Subject Matter Expertise. Crewmembers, dispatchers and other operations personnel who are current and qualified in company operations and represent the population of professionals the AQP will address. The individuals may be called upon to act as liaison with operational support personnel.

(3) Document and Curriculum Development. Interfaces with the AQP Coordinator and the Subject Matter Experts (SME) to develop the requisite AQP process, curriculum, and instructor/evaluator documents.

(4) Document Management. Ensures AQP document control and congruence with FAA requirements.

(5) Computer Support/Database Management. Oversight of the development and management of the performance/proficiency data acquisition and analysis system. In addition,

this individual could be used for other computer-related issues related to the facilitation of an AQP, such as electronic document review.

h. Master AQP Transition Schedule (MATS). The MATS will depict the projected transition/development schedule for all AQP curriculums. Since these schedules usually change, this section of the application must be updated accordingly. Transition from one type training program to another (traditional to Single Visit Training Plan (SVTP) to AQP, or traditional to AQP) may include a period of overlap as one program is phased in and the other phased out. The following guidelines for transition are applicable:

(1) Currently qualified personnel may transition between traditional recurrent training curriculums and continuing qualification curriculums.

(2) Personnel who have completed a traditional training program initial, transition or upgrade curriculums may enter a continuing qualification curriculum.

(3) Partial MATS (incomplete) are not acceptable.

(4) The MATS may provide for incremental implementation of indoctrination, qualification, and continuing qualification curriculums for each AQP.

(5) The MATS must provide the time frame necessary to withdraw from AQP if it becomes necessary to revert to the traditional 14 CFR part 121 or 135 training program.

2-6. APPROVAL. Approval of the application marks the end of phase I and the beginning of phase II.

SECTION 3. PHASE II: CURRICULUM DEVELOPMENT

2-7. OVERVIEW. Phase II is the development of the training curricula that apply to any of the duty positions addressed in the Phase I application (e.g., pilots, flight attendants, dispatchers, instructor, evaluators). There are five general stages in this developmental process, each represented by the required document listed below:

- Job Task Analysis (JTA)
- Qualification standards
- Instructional Systems Development (ISD) methodology
- Curriculum outlines
- Implementation and Operations Plan (I&O Plan)

The task analysis is the basic document that supports the development and analysis of the qualification standards. The ISD methodology defines how the task analysis and qualifications standards will be used to support the development of the curriculums. The last document is the I&O Plan, which explains how the AQP will be put into practice. The applicant must establish, demonstrate, and maintain a clear linkage between each of these steps. This linkage is provided

by a systematic approach to the development of a complete instructional system. This section recommends a systematic approach and a methodology that is acceptable to the FAA, but innovation and practical application may result in equally acceptable variations.

a. Rationale. Under traditional training programs, the FAA evaluates finished training curriculums by comparing their contents, as described in a curriculum outline, to guidance in the regulations and the Aviation Safety Inspector's Handbook. Under an AQP, the ERT evaluates these curriculums by monitoring their development and by approving a series of documents that are preliminary to the curriculum outline. These documents include the task analysis, the qualification standards, and the ISD Methodology. This continuing process allows the FAA greater insight into the rationale used by the applicant to develop each component of each curriculum.

b. Analysis-Based Approach. The analysis-based approach allows each applicant the opportunity to develop operator specific training programs. Consequently, AQP curriculums will be more sensitive to differences in aircraft, operating conditions, emergency and abnormal contingencies, student skill levels, and other operational variables, than are traditional programs. Under an AQP, the FAA monitors the process as well as the product. Instead of basing curriculums on prescribed generic maneuvers, procedures and knowledge items, AQP curriculums are based on a detailed analysis of the requirements of each duty position in each organization. To obtain FAA approval, these new AQP curriculums must be judged to be equal to, or provide better training than, a traditional training program. AQP curricula do not need to duplicate traditional curricula in order to satisfy this criterion, provided that they otherwise incorporate an alternative approach that addresses the required skills and knowledge to perform the job tasks.

2-8. JTA. To understand task analysis as it applies to AQP, it is necessary to build upon the following definitions:

- Job: A job is the summation of functions, identified as tasks and subtasks, performed by an individual at work.
- Function: One of the major subdivisions of work activities performed by one individual. One or more functions constitute a job. Examples of functions applicable to AQP would be: phases of flight, such as takeoff, climb, cruise, etc.
- Task: A task is a unit of work within a function having an identifiable beginning and ending point, which results in a measurable product. An example of a task applicable to AQP would be: perform a normal takeoff.
- Subtask: Specific separate step or activity required in the accomplishment of a task. An example of a sub-task applicable to AQP would be: perform rotation and liftoff.
- Element: A component of training analysis or design. In the case of task analysis, the element may be used as a level of analysis: phase of flight, task, subtask, element, sub-element (a further component of training analysis necessary in the accomplishment of a subtask (e.g., rotate aircraft at Vr to 12 degrees of pitch)). In the case of curriculum design, the element may be used as a level of curriculum organization: curriculum, segment, module, lesson, lesson element, etc.

JTA is the method or procedure used to reduce a unit of work to its base components. The JTA document consists of a detailed, sequential listing of tasks, subtasks, and elements (if required) with the knowledge and skills (technical and crew resource management (CRM)) that clearly define and completely describe the job. The following is a description of the above components:

a. Job Task List. The task analysis process begins with the development of a job task list that includes all of the major tasks performed by those who hold a particular duty or seat position. For example, a pilot-in-command (PIC) job task list includes all major activities involved in operating an aircraft, including conducting ground operations, performing takeoffs, etc. A flight attendant job task list includes all major activities involved in supporting passenger operations, such as performing check-in procedures, performing passenger boarding procedures, performing pre-takeoff cabin preparation procedures, etc. An instructor job task list includes all the major activities involved in teaching students, such as preparing training materials, managing the learning environment, operating training equipment, etc.

(1) Structure. For complex jobs, it is best to divide the job task into its subtasks and elements. Figure 2-2 illustrates how the pilot job task list can be divided, in this case, into 11 phases of operations. Each phase of operations can be then divided into job tasks, subtasks, elements, etc. For example, 2.0 Takeoff can be subdivided into 2.1 Perform Normal Takeoff, 2.2 Perform Instrument Takeoff, 2.3 Perform Engine Failure after V1 Takeoff, and 2.4 Perform Rejected Takeoff. Each of these job tasks can then be further divided into subtasks. For example 2.1 Perform Normal Takeoff, can be subdivided into 2.1.1 Assess Performance and Environmental Factors, 2.1.2 Perform Takeoff Roll, 2.1.3 Perform Rotation and Liftoff, and so on. Where necessary, these subtasks can be further subdivided into elements. For example, 2.1.3 Perform Rotation and Liftoff can be subdivided into 2.1.3.1 Rotate aircraft at VR to target pitch angle, 2.1.3.2 Observe barometric/ADC altimeter increase [PF], 2.1.3.3 Call out positive rate [PM], etc.

(2) Hierarchy. By dividing tasks into subtasks, elements, and sub-elements, each job task listing produces a numbered hierarchy of job requirements for each duty position. These job requirements are essentially the graduation requirements for the courses from which they are developed. Through a series of additional analyses, these job requirements are translated into the training objectives of the various AQP curriculums: Indoctrination, Qualification, and Continuing Qualification. The tasks are translated into terminal proficiency objectives (TPO) and the subtasks into supporting proficiency objectives (SPO). Elements are translated into Enabling Objectives (EO). The hierarchical numbering system is retained as the basis of the audit trail that connects job requirements and performance with curriculum requirements and performance.

(3) Rationale. Proficiency-based training systems always begin with the development of a detailed task listing. This means that required job proficiency is the basis for designing, developing, operating and maintaining the training system. Task 1.1.1 will be taught in lesson 1.1.1, element 1.1.1, assessed using test item 1.1.1, and those test results used to validate that the individual/crew can perform task 1.1.1. This audit trail links job performance to training performance throughout every component of the training curriculum.

FIGURE 2-2.
SAMPLE PILOT JOB TASK LISTING

1. Ground Operations

2.0 Takeoff
- 2.1 Perform Normal Takeoff
  - 2.1.1 Assess Performance and Environmental Factors
  - 2.1.2 Perform Takeoff Roll
  - 2.1.3 Perform Rotation and Liftoff
    - 2.1.3.1 Rotate aircraft at VR to target pitch angle [PF]
    - 2.1.3.2 Observe barometric/ADC altimeter increase [PF]
    - 2.1.3.3 Call out positive rate [PM]
    - 2.1.3.4 Retract Gear [PF, PM]
    - 2.1.3.5 Establish Climb Speed [PF]
- 2.2 Perform Instrument Takeoff
- 2.3 Perform Engine Failure after V1 Takeoff
- 2.4 Perform Rejected Takeoff

3. Climb Operations

4. Cruise Operations

5. Descent Operations

6. Approach Operations
- 6.1 Perform Approach
  - 6.1.1 Perform Visual Approach
  - 6.1.2 Perform Non-Precision Approach Procedures (VOR, NDB, LOC, LOC/BC, LDA, SDF, ASR, RNav/FMS, GPS)
  - 6.1.3 Perform Cat II ILS
  - 6.1.4 Perform Cat IIIb ILS
  - 6.1.5 Perform Coupled Autopilot Approach and Autoland Procedures
- 6.2 Perform One Engine Inoperative Cat I ILS Approach and Landing
- 6.3 Perform One Engine Inoperative Missed Approach
- 6.4 Perform Visual Approach and Rejected landing

7. Landing Operations
- 7.1 Normal Configuration
- 7.2 Auto Land
- 7.3 No-flap

8. After Landing Operations

9. Aircraft Systems Operations

10. Abnormals and Emergency Procedures

11. Supplementary Procedures

b. Learning Analysis. The second part of the JTA is sometimes called competency analysis, skill analysis, knowledge skills and abilities (KSA) analysis, or hierarchical analysis. Here, those tasks, subtasks or elements that were selected for training are further analyzed into their more basic knowledge and skill level (attitudes are optional). This learning analysis will determine, to a finer level of detail, exactly what should be learned and the best approaches for teaching and testing what is to be learned. While the JTA adds greater specificity to the performance and training requirements of the tasks, the learning analysis defines in greater detail what should be taught and tested, and how it should be taught and tested, to ensure that the students acquire those job performance requirements.

c. JTA Document. As discussed in Chapter 1, the JTA document is one of six documents unique to AQP that is maintained in a current status throughout the program's lifetime and must have an acceptable revision control methodology.

2-9. QUALIFICATION STANDARDS. A qualification standard is a job task proficiency objective (TPO or SPO) linked to an evaluation strategy. A certificate holder's qualification standards define the requirements of mastery for specific duty positions and replace the practical test standards (PTS) for certification under AQP. The qualification standards document is the single most important part of any AQP. It provides the complete proficiency baseline for all duty positions and serves as the basis for the curriculum development for both the Qualification Curriculum and Continuing Qualification Curriculum. The first step in the development of qualification standards requires the development of proficiency objectives from the JTA.

a. Proficiency Objectives. A proficiency objective is the result of applying a performance statement, condition(s), and proficiency standard(s) to a task or a subtask. For each duty position, there are two types of proficiency objectives, both developed from the task analysis: TPOs, which are developed from tasks; and SPOs, which are developed from subtasks.

- A performance statement specifies precisely what behavior must be exhibited
- A condition statement identifies operational and equipment contingencies and environmental factors under which the behavior will be accomplished
- A standard or criterion statement establishes the parameters and tolerances that define satisfactory performance.

NOTE: All document references used in defining the performance, conditions, and standards for each proficiency objective must be listed by title and chapter in the documentation of the proficiency objectives in the qualification standards document.

(1) TPOs. TPOs are statements of performance, conditions, and standards established at the task level. A complete set of TPOs will fully describe a particular job in the applicant's flight operation. TPOs are classified as critical and/or currency based on an operational assessment in the analysis process. This classification determines the frequency with which these tasks are evaluated during the continuing qualification cycle. TPOs also include the range of flight training equipment and the abnormal and emergency contingencies to be considered for training and evaluation.

(2) SPOs. SPOs are statements of performance, conditions, and standards established at the subtask level. SPOs are used to develop training and evaluation curriculum lessons, modules, and segments. SPOs include the range of flight training equipment and the abnormal and emergency contingencies to be considered for training and evaluation.

(3) Enabling (Learning) Objectives (EO). EOs are used to prepare individuals and crews for subsequent training in an operational cockpit environment. An applicant may identify a certain knowledge factor, cognitive skill, motor skill, or CRM factor as an enabling proficiency objective. These are not normally carried forward in the supporting performance objective statement and, therefore, are not normally found on the qualifications standards document. However, performance of an SPO would depend on a student first acquiring the particular knowledge, skill, attitude, or CRM factor covered by an enabling objective.

> **NOTE: A learning objective (usually an EPO), which does not require operational conditions, can be demonstrated in a classroom or academic type setting. A performance objective (usually a TPO or SPO), which requires operational conditions, must be demonstrated in an environment equivalent to the operational environment.**

(4) Task Factors Analysis. This process rates TPOs and SPOs using the following factors: criticality, currency, need for training, applicable conditions, and applicable standards. The determination of criticality and currency guides when and how the objective is trained, validated, or evaluated (see Figure 2-3). To make this determination, the analyst answers a series of questions about each TPO and SPO to describe its performance requirements, both on the line and in the training setting. Criticality is a determination of the relative impact of substandard task performance on overall safety. It indicates an increased need for awareness, care, exactness, accuracy, or correctness during task performance. Critical tasks are proficiency objectives that are trained, validated, or evaluated more frequently during an AQP evaluation period. A currency task is a proficiency objective for which individuals and/or crews maintain proficiency by repeated performance of the item in normal line, duty or work operations. Most currency items are validated during line checks and may be sampled in the Continuing Qualification Cycle. Tasks that are determined to be critical and not current are trained, validated, or evaluated each evaluation period. Tasks that are determined to be neither critical nor current are trained, validated, or evaluated each continuing qualification cycle.

> **NOTE: Many flightcrew job task SPOs do not fit the classic definition of a subtask; a specific separate step or activity required in the accomplishment of a task. In recognition, non-critical/non-current SPOs under a common TPO that differ only in knowledge requirements may be trained, validated, or evaluated in a Sim/Flight Training Device (FTD), during line checks, using orals, written or electronic exams, classroom briefings or distributed material. However, it is recommended that these SPOs, as appropriate, be demonstrated in a Sim/FTD on a recurring cycle approved by the ERT.**

The FAA recommends that the applicant examine each task, subtask, and element, as appropriate, for the following factors:

(a) Primary factors to be considered:

1 Statement of performance.

2 Environmental conditions affecting difficulty/success.

3 Performance standards (parameters with tolerances).

4 Abnormal and emergency procedure contingencies.

5 Document references (title and section) governing or specifying the operation.

6 Consequence of error to safety.

7 Relative difficulty.

(b) Additional factors:

1 Equipment and system operation dependencies (if used for establishing learning sequences for curriculum development).

2 Criterion for success upon which performance standards are based. If new performance standards are created, this criterion should be established for each task and subtasks (e.g., the tracking standards for very high frequency (VHF) omni-directional radio (VOR) approaches are based on navigation requirements). The navigation requirements are the criteria for success. Success criteria are developed in those cases where current standards are missing or thought to be inadequate.

FIGURE 2-3.
AQP CONTINUING QUALIFICATION CRITICAL/CURRENCY CHART

Training Priority	Critical (Y/N)	Currency (Y/N)	Terminal Proficiency Objective/Supporting Proficiency Objective
1	YES	NO	Train, validate, or evaluate each evaluation period.
2	NO	NO	Train, validate, or evaluate each Continuing Qualification Cycle.
3	YES	YES	Sample at first look/MV/LOE and/or line checks each evaluation period.
4	NO	YES	Sample at first look/MV/LOE and/or line checks each Continuing Qualification Cycle

FIGURE 2-3.
AQP CONTINUING QUALIFICATION CRITICAL/CURRENCY CHART (Continued)

Training Priority	Critical	Current	Month	Sample
1	Yes	No	12	No
2	No	No	24	No
3	Yes	Yes	12	Yes
4	No	Yes	24	Yes

NOTE: The sample size must be large enough to provide reasonable assurance that the population is remaining proficient.

NOTE: The qualification standards document for instructors/evaluators does not need to include conditions or a criticality/currency analysis.

b. Evaluation Strategy. The qualification standards document will identify the curriculum (indoctrination, qualification, and/or continuing qualification) in which specific proficiency objectives will be met. The applicant should consider student entry level in determining this allocation. All terminal proficiency objectives must be included in a qualification curriculum regardless of entry-level analysis. For SPOs, an entry-level analysis determines what objectives will be taught under each curriculum (see section 3, paragraph 2-11a of this chapter). All objectives should also be covered in continuing qualification test and evaluation strategies.

(1) Consolidation of Objectives. In the qualification standards document, qualification standards are developed at the task and subtask level only and at no lower level. Tasks become TPOs and subtasks become SPOs by combining performance statements, conditions and standards. TPOs and SPOs having common knowledge, skill, attitude, and/or CRM factors may be consolidated to avoid duplication. The consolidated tasks are translated into TPOs, and a terminal level qualification standard is developed for each one. The consolidated subtasks are translated into supporting proficiency objectives, and a supporting level qualification standard is developed for each one of those as well. An example of consolidation would be non-precision approaches. VOR and nondirectional beacon (NDB) approaches may be consolidated as a single proficiency objective if the performance statement and standards are the same.

(2) Conditions, Contingencies, and Media. The qualification standards will include a listing of relevant operational and environmental factors along with equipment contingencies to be addressed in training. They will also identify the media that will be employed to either test, validate, or evaluate the specific training objective. There is a difference between the qualification standard for a qualification curriculum and one for a continuing qualification curriculum. The TPOs and SPOs in a qualification standard for a qualification curriculum must identify the specific set of conditions and contingencies to be employed in training and evaluating a task (usually with an asterisk). In addition, the media description will describe the specific media in which the task will receive final evaluation. In contrast, in a continuing qualification curriculum, the TPOs and SPOs may identify a selectable menu of conditions and contingencies to be employed in training or evaluation, and a media range that will specify the minimum media level in which the task may be trained, validated, or evaluated.

(3) Qualification and Continuing Qualification Curriculums. The qualification standards for both qualification and continuing qualification curricula can be combined into one document as long as the differences in conditions and media are addressed, and the tasks are annotated for applicable curriculums. However, if applicants find it more convenient to submit separate qualification standards documents for these curriculums (e.g., because of differences in conditions, contingencies, and media between the qualification and continuing qualification curricula), they may do so. In addition, some qualification standards may be "aircraft generic" in that they may apply to more than one aircraft type. For ease of use and definition of "fleet common" curricula, applicants may also find it convenient to specify these qualification standards separately from those qualification standards that apply to only one aircraft fleet type.

c. Qualification Standards Document. The qualification standards document is the third of the six documents unique to AQP that is maintained in a current status throughout the life of the program and must have a revision control methodology. It is the central AQP document because it provides the regulatory basis for all deviations from current regulations, and identifies the basic training and evaluation requirements. The qualification standards document has four parts: the prologue, a regulatory comparison, the evaluation/remediation methodology, and the specific TPO or SPO qualification standard.

(1) Prologue. The qualification standards document requires an introductory section that explains the methodology, format, and terminology of the standards to the broad range of company and FAA personnel who will need an in-depth understanding of the document to perform their job functions.

(2) Regulatory Requirements Comparison. The qualification standards document must also include regulatory comparison information. The comparison must meet the requirement of AQP regulatory guidance, which states that the AQP program "...must indicate specifically the requirements of parts 61, 63, 65, 121 or 135, as applicable, that would be replaced by an AQP curriculum." (see Appendix 3 for an example of a regulatory comparison chart).

> **NOTE: The purpose of these charts is not to justify differences from current traditional practices, but merely to document them once they have been justified. It is the quality control processes of AQP that form the basis for establishing an equivalent level of safety.**

(3) Testing/Validation/Evaluation and Remediation Methodology. Before implementing an AQP curriculum, the applicant must decide how, when, where, and who will assess a student's proficiency on each terminal and supporting objective. The guidelines in Figure 2-3 may be used to translate TPOs' and SPOs' criticality and currency ratings into testing strategies for the continuing qualification cycle. This testing strategy may include a discussion describing how similar SPOs will be addressed. For example, the TPO non-precision approach may have many SPOs, such as VOR, NDB, localizer (LOC), etc. Depending on the criticality/currency rating, all of these approaches do not have to be evaluated each evaluation period. This section of the document is where the applicant can describe how these approaches

will be alternated/sampled over multiple evaluation periods or continuing qualification cycles. The testing/validation/evaluation methodology also addresses the applicant's approach to documenting the different qualifications of the instructor/evaluator, in terms of who will conduct the testing, validation, LOE, and line checks. In this section, the applicant can describe the level of device appropriate for conducting the evaluation. It also identifies the point in the curriculum when the testing/validation/evaluation methodology will be applied, and identifies what constitutes a failure and/or unsatisfactory performance. In addition, the applicant must specify the strategy for remedying unsatisfactory performance.

(a) General. For each terminal and supporting proficiency objective, the applicant will designate the testing/validation/evaluation strategy. These strategies could include, and are not limited to:

(1) Train to proficiency.

(2) Systems/knowledge validation.

(3) Procedures validation.

(4) Maneuvers validation.

(5) LOE.

(6) Operating experience.

(7) Line check.

(b) Training Media. The applicant also will designate the level of training devices, simulators, or aircraft to be used to evaluate the proficiency objective.

(c) Rating Scale/Scoring. The applicant will identify the rating methodology that will be used to grade the performance of the proficiency objectives against the qualification standards. Typically, the measurement codes associated with performance events are ratings and reason codes or skill categories. Ratings are used to define different quality levels of performance. Rating codes usually are carrier specific and the FAA requires that something more sensitive to performance differences than a binary code is used (i.e., some rating method that provides more performance differentiation than pass/fail for individual items being evaluated. Results of an evaluation event, such as an LOE, are still recorded on a pass/fail basis). Each carrier should ensure that the grades established on the rating scale are clearly defined, meaningful to the instructor/evaluator (I/E), and easily used for performance assessment. Although consistency among fleets and across different types of evaluations (line check, maneuvers validation, and LOE) is important and generally desirable, rating scales may be slightly different when used for different purposes such as training vs. evaluation. Figure 2-4 provides an example of a rating scale that discriminates among performance levels:

FIGURE 2-4
RATING SCALE FOR PROCEDURES VALIDATION, FIRST-LOOK, MANEUVERS VALIDATION, LOE, OR LINE CHECK

GRADE		CRITERIA
1	Unsatisfactory	Major deviations from the prescribed qualification standards occur that are not recognized or corrected. Individual or crew performance could result in hull loss or loss of life. CRM/DRM skills are not effective.
2	Below Standard	Deviations from the prescribed qualification standards occur that are not recognized or corrected. Individual or crew performance is safe but would be unsatisfactory if diminished by any amount. CRM/DRM skills are not completely effective.
3	Standard with Debrief	Deviations occur from the prescribed qualification standards that are recognized and most corrected. Individual or crew performance meets expectations. CRM/DRM skills are effective.
4	Standard	Minor deviations occur from the prescribed qualification standards that are recognized and corrected in a timely manner. Individual or crew performance meets expectations. CRM/DRM skills are clearly effective.
5	Excellent	Performance remains well within the prescribed qualification standards. Individual or crew performance, management and CRM/DRM skills are exemplary.

NOTE: This example should not be taken as limiting possible intervals to a five-point scale. With appropriate scale construction and instructor/evaluator training, carriers may elect to define other scales that maximize the quality (sensitivity, reliability, validity) of the collected data.

(d) Remediation Strategy. This section of the qualification standards document should describe the methodology that will be used to remediate unsuccessful testing, validation, or evaluation sessions. This remediation strategy must detail when and what may be repeated and whether or not additional training is warranted. Remediation strategy must also specify when no more training will be offered to the individual and the resulting actions such as "Referred to Committee," returned to previous position, etc. Chapter 3, paragraph 3-4c has expanded discussions on validation, evaluation, and remediation in the qualification and continuing qualification curriculums. This strategy may be presented in narrative text or flowchart format.

(e) Special Tracking. Special tracking is the assignment of an individual trainee to an augmented training or evaluation schedule, or both. It should be applied to individuals who have failed to demonstrate proficiency during an evaluation event (e.g., LOE). There may be other criteria that the certificate holder may use to place an individual on special tracking. Special tracking triggers could include failure to maintain proficiency, an extended absence from duty, for new PICs, or at the request of the individual trainee. However, the AQP participant may implement an AQP strategy such as reduced training intervals that would offset the need for a special tracking strategy. This section should discuss the following:

1 The situation(s) that requires an individual to be placed in special tracking.

2 The strategy to be used.

3 When special tracking is no longer required.

(4) The Qualification Standard. The information contained in the specific qualification standard is the basis for determining proficiency and evaluation criteria. The qualification standard is constructed by applying a performance statement, conditions, and standards to a task or subtask, thereby creating a TPO or an SPO. Although each operator will determine the format and content of its qualification standards, component fields have developed out of practice and are illustrated in Appendix 5. In this example, the phase of operations is 6.0 Approach Operations and Landing. The TPO is 6.1 Perform an Instrument Approach. The SPOs are 6.1.1 Perform a 2 Engine Precision Approach Cat I ILS (instrument landing system) Approach and 6.1.2 Perform a 1 Engine Inoperative Cat I ILS Approach.

NOTE: Variation in the format of a given air carrier's qualification standards is permissible if all of the categories of information in the example are addressed.

(a) Header. A header identifies the airline and the document.

(b) Revision Control. Page revision control dates and revision numbers.

(c) Page Numbers. Consecutive page numbers.

(d) Phase of Operations. Number and title from task listing.

(e) Qualification Standard Title. Either TPO(s) or SPO(s).

(f) Hierarchical Task or Subtask. Identifier and title from task listing.

(g) Crew Duty Position(s). This identifies which crewmember(s) will be evaluated performing the task.

1 Pilot-in-command = PIC.

2 Second-in-command = SIC.

3 Flight engineer = FE.

4 Capt., First Officer, Second Officer.

(h) Criticality/Currency Rating. This may be the first place that the task factors analysis is tied to the tasks.

NOTE: The qualification standards document for instructor/evaluators does not need to include conditions or a criticality/currency analysis.

(i) Curriculum. This field identifies the curriculum(s) in which the task will be trained and evaluated.

(j) Evaluation Strategy. The evaluation point for a particular qualification standard (e.g., (1) train to proficiency; (2) systems validation; (3) procedures validation; (4) maneuvers validation; (5) LOE; or (6) line check).

(k) Media. The specific media in which training and/or evaluation will be conducted. For qualification, the media is the lowest media used for final evaluation. For continuing qualification, the media includes the range of media used for training, validation, and evaluation.

(l) Performance Statement. An expanded statement of expected behavior that, when executed, will complete the work required for a specific portion of a job. A performance statement specifies precisely what behavior must be exhibited, and may include the knowledge and skill issues that comprise the enabling objective supporting that performance.

(m) Operational and Environmental Conditions. Conditions describe the range of circumstances under which student performance will be measured and evaluated. Conditions include the operational environment (navigational aid (NAVAID) inoperable, different aircraft weight, passengers not seated, aircraft configuration, etc.), and natural environment (ceiling, visibility, wind, turbulence, etc.). The qualification standard should: (1) indicate those specific conditions to be trained and tested as part of the qualification curriculum; and (2) provide a more exhaustive listing of conditions over which crewmembers will be trained and tested during the course of successive continuing qualification cycles.

(n) Contingencies. Contingencies include abnormal situations, minimum equipment list (MEL)/configuration deviation list (CDL), and emergencies. The qualification standard should (1) indicate those specific contingencies to be trained and tested as part of the qualification curriculum; and (2) provide a more exhaustive listing of contingencies over which crewmembers will be trained and tested during the course of successive continuing qualification cycles.

(o) Maneuver Standards. Observable, measurable parameters of performance with tolerances (e.g., course deviation degrees (+ or -)). Standards include maneuvers, procedures, and CRM considerations.

(p) References. Identify the primary references from which performance statements and associated standards were derived. Cite documents by title and where applicable, chapter or section. Page numbers are not required.

2-10. INSTRUCTIONAL SYSTEMS DEVELOPMENT METHODOLOGY DOCUMENT. This is another of the six documents unique to AQP and must have an acceptable revision control methodology. Applicants with established curriculum development guidelines may submit these for consideration. Others should describe a systematic approach for developing a proficiency-based training system that is organized around the teaching and testing

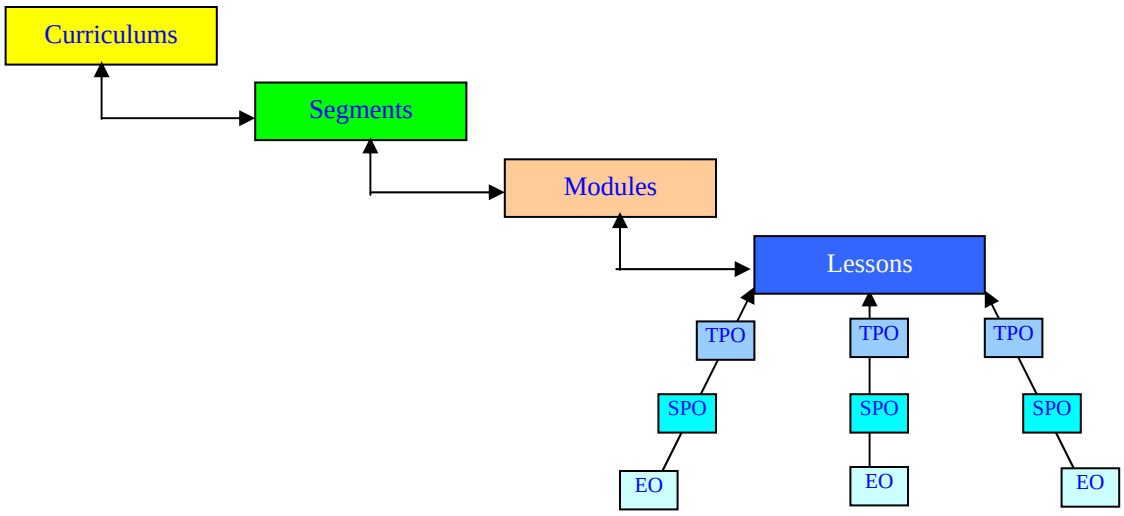
of terminal, supporting, and enabling proficiency objectives. The methodology identifies the rationale, justification, and subsequent documentation to be used in the applicant's curriculum development process. The instructional systems development methodology document describes the approach to be used by applicant airlines to develop and maintain all AQP curriculums. The Instructional Systems Development Methodology document should be finalized before constructing curriculums for each duty position. It applies to pilot, instructor, and evaluator programs, and may be expanded to include other personnel, such as flight attendants and dispatchers. This document is divided into two sections. The first section, Curriculum Development Procedures, describes the applicant's approach for using the JTAs and qualification standards as baseline documents to construct their general training curriculums across all AQP courses. The second section, Line Operational Simulation Methodology, describes the approach for developing LOS scenarios.

a. Curriculum Development Process. Applicants should describe the process they will use to build their curriculums based on the JTA, qualification standards, and proficiency objectives they develop for each duty position. This document should discuss how:

- TPOs and SPOs are allocated to curriculums
- Learning and evaluation activities are developed to support these objectives
- Instructional media and methods are assigned to objectives
- Objectives are clustered and sequenced into lessons, modules, segments, and curriculums (see Figure 2-5 and Figure 2-6 for examples)
- An audit trail (hierarchical numbering or a matrix) will be maintained to link job tasks, proficiency objectives, lesson activities/content, and test items

NOTE: The resulting curriculums are translated into a course footprint and are documented in the curriculum outline. These curriculums are expanded in more detail in the student and instructor syllabi and in individual lessons and tests.

FIGURE 2-5.
CURRICULUM DEVELOPMENT



b. LOS Methodology. While individual LOE scenario events are approved by the POI, the ERT must first approve the methodology that generates LOE scenarios. Unless the carrier has an alternative proposal, this methodology should follow the general guidelines for LOS development produced by the ATA (Air Transport Association of America) AQP Working Group. This approach divides the typical scenario into a series of relatively independent segments, called event sets. A typical scenario might have six or eight event sets relating to the phases of operations (ground operations, takeoff, climb, cruise, descent, approach, landing, and after landing). Each event set consists of a series of training or evaluation events, which include both technical and CRM activities. This technique enables scenarios to be constructed in a building block approach, ensuring that each event set is carefully sequenced and considered in relation to the other event sets in the scenario.

2-11. CURRICULUM OUTLINE DOCUMENT. This is the fifth of the six documents unique to AQP that must have an acceptable revision control methodology. The curriculum outline is a listing of course material divided into segments, segments into modules, modules into lessons, and lessons into elements. Curriculum outlines are developed and submitted with the understanding that application of the course material may require some flexibility regarding the actual day on which each activity is accomplished. Each part of the curriculum outline must clearly indicate the subject matter to be taught and correspond directly to the hierarchical system of the task analysis. While the curriculum outline document need only go down to the level of the element under each lesson title, the applicant will be required to show the objectives (terminal, supporting and enabling) associated with each lesson. Refer to Figure 2-5 for an illustration of this association. This is part of the necessary audit trail that links the job requirements (JTA) to the training requirements (qualification standards) to the training activities (curriculum outline). A curriculum outline provides the basis for the curriculum footprint, which is a high level graphical overview of the curriculum content depicting the training and evaluation activities and the planned hours for each day of the curriculum (see Figure 3-4). The curriculum outline document should reference the results of the student entry analysis, if one was conducted, and will include a curriculum footprint. Figure 2-7 provides an example of a curriculum outline showing portions of ground training and flight training segments.

a. Entry Level Analysis. The applicant should develop and document a student entry-level performance analysis for TPOs and SPOs. This analysis compares the KSAs of the student population against the TPOs and SPOs in the JTA in order to fit the instruction to the student. A four-point performance difference rating scale is suggested (Figure 2-6). Highly skilled instructors familiar with the experience and background of the student population and knowledgeable with the terminal and supporting proficiency objectives should make the rating. This analysis provides guidance to determine efficient teaching strategies for the indoctrination and qualification curriculums. This analysis can also identify where training is not needed, where basic “enabling” skills must be taught, and what number of trials is needed for an applicant to reach TPO standards. More than one population group may be used in conducting the student entry analysis for a single duty position. The results of such an analysis may be used, for example, to justify alternative curriculum tracks or modules targeted at expected differences in entry background, and in order to achieve the most efficient use of training resources. The

initial justification for alternative curriculum tracks must be validated though subsequent data analysis.

FIGURE 2-6.
PERFORMANCE DIFFERENCE RATING SCALE

Performance Difference Code	Performance Difference Description
4	Meets or exceeds the required performance.
3	Can accomplish tasks with minor errors or omissions. May take longer than expected or allowed.
2	Cannot accomplish tasks. Does demonstrate basic background skills and knowledge.
1	Does not demonstrate basic background experience, skills, or knowledge. Unfamiliar with simplest elements of a task.

b. Trainee and Instructor/Evaluator's Curriculums. The instructor and evaluator curriculums associated with each duty position must be developed in the same systematic manner as those developed for the duty positions themselves. This requires the development of separate JTA, qualification standards, curriculum outlines and other documents for these positions although they may share some common modules or lessons. Instructors and evaluators require an indoctrination curriculum that is separate from the duty position indoctrination curriculum, as well as a separate qualification and continuing qualification curriculum.

c. Link Qualification Standards to Curriculums. Both the qualification and continuing qualification curriculums for a given duty position are derived from the same set of qualification standards. The link between qualification standards and a curriculum is the proficiency objective. As a rule of thumb, qualification standards developed from TPOs focus more on the higher-level evaluation activities than qualification standards developed from SPOs. Qualification standards developed from SPOs focus more on the lower level learning activities that may be validated and represent the components of those higher level standards. Therefore, a qualification curriculum will focus equally on qualification standards developed from TPOs and SPOs, while the continuing qualification curriculum will focus more heavily on the qualification standards developed from TPOs. Indoctrination curriculums may or may not have qualification standards of their own. In either case, they provide training on common knowledge items (enabling objectives) that will support the mastery of qualification standards in the qualification and continuing qualification curriculums.

FIGURE 2-7.
SAMPLE AQP CURRICULUM OUTLINE

B 737 Qualification ***Curriculum*** Outline

Segment: Ground Training

Module**:** Introduction to Aircraft

Lesson #: Aircraft Overview 9.1.4
Element: Fuselage 9.1.4.1
Element: Wings 9.1.4.2
Element: Flight Controls 9.1.4.4, 9.1.4.5, 9.1.4.6
Element: Landing Gear 9.1.4.7
Element: Powerplant 9.1.4.3
Element: Fuel System 9.1.4.8
Element: Hydraulic System 9.1.4.9
Element: Electrical System 9.1.4.10, 9.1.4.10.1, 9.1.4.10.2, 9.1.4.10.3

Lesson #: Aircraft Lighting 9.1.9
Element: Exterior Lighting 9.1.9.1
Element: Cockpit Lighting 9.1.9.2
Element: Cabin Signs and Lights 9.1.9.9, 9.1.9.4, 9.1.9.6
Element: Lighting Power Sources 9.1.9.5
Element: Emergency Lighting 9.1.9.5, 9.1.9.5.1, 9.1.4.10.2

B 737 Qualification ***Curriculum*** Outline

Segment: Flight Training (FT)

Module: Flight Training Device (FTD)

Lesson: FTD #1 Pre-Flight Normal Checklists
Element: Flight Compartment Safety Inspection 1.2.5.1
Element: Flows 1.2.7.1
Element: Acceptance Checklist 1.2.8.1
Element: Before Starting Engines Checklist 1.2.11.1
Element: Normal APU First Engine Start 1.9.1.1
Element: Normal APU Second Engine Start 1.9.1.4
Element: Pushback 1.9.6.1
Element: Before Taxi Checklist 1.4.1.1
Element: Normal Taxi 1.4.2.1
Element: Before Takeoff Checklist 1.4.9.1
Element: Line-Up Checklist 1.4.4.1

2-12. IMPLEMENTATION AND OPERATIONS PLAN (I&O PLAN) DOCUMENT. This document, like the other five unique AQP documents, must have an acceptable revision control methodology. It must be updated as necessary to accurately reflect the status of the AQP applicant's plan for implementing and operating each of the AQP curriculums. This document is a milestone schedule detailing the transition to an AQP for crewmembers, instructors, and evaluators and a blueprint describing provisions for maintenance, administration, data management, and continuing quality control of curriculums. As a document, the I&O Plan can be sectioned into two parts. The first part spells out how the operator proposes to implement the AQP. Included in this proposal is the schedule for phase III, training and evaluation to include I/E training, and small group tryouts. It should also include provisos for evaluating the effectiveness of performance measurement tools, and provisions for evaluating facilities, courseware, and equipment before starting the plans for the small group tryouts. The second part explains how the certificate holder intends to operate the AQP in phases IV and V. Included in this section are strategies for maintaining the program, crew pairing policy, first-look administration, and I/E requirements. The operations plan should also include the data management plan, a statement of understanding addressing the collection and analysis of performance/proficiency data, a description of the Performance Proficiency Database (PPDB), the data management collection process, and the FAA data submission, analysis, and reporting requirements.

a. Implementation. This section provides the schedule for evaluating curricula in the small group tryout, as well as I/E training, and the strategies for evaluating facilities, courseware, and equipment. It also includes the proposal for evaluating instructors, evaluators, and performance measurement tools such as the rating scale and grade sheets. The schedule for initiating phase III should correlate with the Master AQP Transition Schedule as submitted in the application. This part of the I&O Plan is updated each time a new curriculum is added to the AQP and a small group tryout is planned.

> **NOTE: If the certificate holder is requesting no-jeopardy credit for the students in the small group tryout, it must be indicated in the I&O Plan and requested in writing to the FAA VSP Manager and the POI.**

b. Operations. This section of the I&O plan describes the guidance and policies that will be used to provide for AQP maintenance, first-look administration, crew pairing policy, instructor/evaluator requirements and data management. Once established, the operations section remains reasonably stable and does not necessarily change with the addition of a new curriculum.

(1) AQP Maintenance Strategy for Phases IV and V. This section describes quality control procedures (i.e., plans for acquiring and measuring data for tracking curricula, students, instructors, and evaluator performance). It also includes the strategy employed for curriculum maintenance and update. Maintenance includes the methodology for maintaining control of the AQP. It includes approval documents, maintaining curriculum currency, upgrading equipment, monitoring and responding to demographic changes, and for using training/evaluation feedback from the PPDB and other forms of surveillance to maintain and improve the AQP.

(2) First-Look Activity Administration. First-look performance items are graded procedures/maneuvers performed for the first time since the previous training cycle. The "first-look" grades are analyzed to determine trends of degraded proficiency due to numerous factors, including the length of the training interval. To maintain the validity of the performance proficiency data obtained from the performance of the "first-look" activities, this section must describe the strategy employed for those activities. This strategy must state that information or techniques that would unduly interfere with the "first-look" performance validity will not be briefed before the first execution of these items. In addition, this strategy should discuss how first-look maneuvers are selected and how they will be administered.

(3) Identify LOS Crew Scheduling and Pairing Strategy. A basic requirement of AQP is to train and evaluate crewmembers in a crew configuration identical to line operations. In AQP, line crewmembers must be scheduled and paired together, as much as practical, in a standard crew configuration (e.g., line captain with line first officer). The FAA recognizes that circumstances will occur where the initial composition of the schedule cannot be maintained. Hiring requirements, illness, high first officer to captain ratios, or failure of a crewmember to progress, are all situations that would necessitate providing a seat substitute to complete the training. This section must address the decision rules that will apply to the selection of seat substitutes for those circumstances. In all cases, the seat substitute must be task-familiar with the duty position.

(4) Instructor/Evaluator Requirements. This part will address the specific job functions, training, validation, or evaluation that instructors and evaluators are authorized to perform. It will identify the title of each position and describe the training that each receives in order to perform the job function associated with that event. The table in Figure 5-1 illustrates the level of authorization needed for an individual to either train, validate, or evaluate an AQP event.

(5) Data Plan. Before an applicant can proceed with data collection and analysis, it must establish the intended purpose and method for the collection, entry, reporting, and analysis of AQP training/evaluation data for each curriculum. The plan must be thorough and accurately reflect the airline's PPDB system. The AQP applicant must also acknowledge its responsibility to collect and analyze more data than required for submission to the FAA in order to adequately identify performance trends and requisite changes to factors that impact the performance. For example, the data that is submitted to the FAA is the result of the execution of TPOs and SPOs and is analyzed at that level by the FAA. Refer to Chapter 8 of this AC for further explanation.

(a) Data Collection. Should address the methods used to collect performance/proficiency data for all curriculums. These methods will include the rationale for employing the method as well as providing the data input medium (e.g., grade sheets, computer-input screens, etc.) as examples that exemplify the data acquisition rationale. In addition, the data collection method should explain data input quality control, security, and usability.

(b) Data Management. Should explain the means and strategy the airline intends to employ to enter, access, and assimilate the AQP and the single visit training program (SVTP) performance/proficiency data that is collected. Included in this explanation should be:

1 The type of software data management system employed (e.g., relational database, spreadsheet etc.).

2 The organization of the information in the electronic medium (e.g., database definition, database table relationships, spreadsheet description, etc.).

3 A description of the user interface to this data management system.

(c) Data Analysis. Discuss the type of analysis that will be employed to facilitate the AQP performance information needs of the airline and the FAA. This discussion of the data analysis must address how each type of AQP data will be analyzed, including training and evaluation feedback as part of determining the effectiveness of the program. This discussion should be used as a prologue to the annual AQP report.

(d) Data Reporting. Discuss the FAA AQP data reporting requirements that must be met (to include format and frequency). In addition, discuss the internal quality assurance data reporting that will be employed, to include report types, frequency, and for which airline personnel the reports are intended.

2-13. APPROVAL. Approval of above documents marks the end of phase II and the beginning of phase III.

SECTION 4. PHASE III: SMALL GROUP TRYOUT (IMPLEMENTATION)

2-14. OVERVIEW. In phase III, the AQP applicant will acquire and test the resources essential to support one or more of the indoctrination, qualification, or continuing qualification curriculums. These activities include developing courseware to implement the curriculum(s), training instructors and evaluators, conducting small group tryouts, making program revisions, and submitting data.

a. Resources. During this phase, the applicant will secure the training facility and equip classrooms with training aids, courseware, and other features that contribute to creating and maintaining a positive learning environment.

b. Train Instructors and Evaluators. The applicant must train, evaluate, qualify and provide an opportunity for the FAA to observe, if necessary, their instructors and evaluators before and during the small group tryouts (refer to Chapter 5 for more information on the training, observation, and quality control of instructors and evaluators).

c. Conduct the Approved Curriculum. This training and evaluation will consist of small group tryouts of all lessons using actual students and instructor/evaluators. The evaluation may involve no-jeopardy credit for students, since its primary purpose is to determine lesson suitability and effectiveness. The applicant may choose, however, to give student credit for part or all training and qualification achieved in this phase. The decision to give credit must be

approved by the FAA before conducting the curriculum evaluation and the air carrier's request to do so should be submitted by letter to the FAA VSP manager and the POI.

d. Performance/Proficiency Data Submission. The applicant will submit to the FAA VSP manager, on a monthly basis, the required performance and proficiency data. This data will be in electronic, digitized format. Any changes to format or procedures will be discussed with the FAA VSP manager prior to submission. The monthly submission of this performance/proficiency data will continue for the life of the curriculum's lifetime (i.e., through phases III, IV, and V). See Chapter 8 for more information.

e. Program Revisions. Lessons learned as a result of this phase will be incorporated as changes to the approved AQP documents from phase I and II and in curriculum maintenance reports submitted to the FAA on an annual basis. Improvements will be made to the courseware, hardware, software, personnel, organization, and data collection and reporting system of the AQP, based on system performance and the examination of performance and proficiency data. These enhancements will be implemented using the processes and the procedures described in the applicant's approved AQP maintenance strategy. This plan is part of the I&O Plan.

2-15. APPROVAL. Approval of the initial operations marks the end of phase III and the beginning of phase IV.

SECTION 5. PHASE IV: INITIAL OPERATIONS

2-16. OVERVIEW. In this phase, the applicant implements the indoctrination, qualification, or continuing qualification curriculum in accordance with the approved AQP documents. This phase for the continuing qualification curriculum calls for initial operation of the curriculum for a minimum of 2 years to complete the AQP training cycle. The 2-year phase IV period may not necessarily be applicable to the indoctrination and qualification curriculums. Unlike the Continuing Qualification curriculums, these courses of training are not cycle-dependent. Depending on the frequency that each curriculum is applied (new hires) and the successful results of each curriculum, phase IV may be longer or shorter than 24 months.

2-17. PHASE IV ACTIVITIES. During phase IV, the applicant will implement and complete a full evaluation, including collecting program audit data and individual performance/proficiency data, analyses, and reports. Collected data will be used by:

a. The applicant for its internal quality control program to maintain curriculum and courseware concurrence, suitability, and adequacy.

b. The applicant to analyze and validate crewmembers, dispatchers, and other operations personnel performance.

c. The applicant and the FAA to analyze and validate instructor/evaluators performance.

d. The applicant and the FAA to support analysis for special subjects, such as CRM performance factors.

e. The FAA to analyze and validate curriculum performance.

f. The FAA to analyze and validate program development, implementation, and maintenance procedures.

2-18. REVISIONS. The focus of this phase is the validation of the AQP curriculum by acquiring performance/proficiency data and lessons learned in the course of conducting the curriculum. Applicants will summarize the lessons learned and adjustments made to the curriculums in an annual report. In addition, adjustments made to the AQP will be reflected in revisions to the approved AQP documents. The successful completion of this phase, and approval of the commensurate revisions to the approved AQP documents and reports, will qualify an applicant for entry into the final phase of the AQP process: Phase V, Continuing Operations.

2-19. APPROVAL. Approval of the continuing operations marks the end of phase IV and the entrance into phase V.

SECTION 6. PHASE V: CONTINUING OPERATIONS

2-20. OVERVIEW. In this phase, the applicant continues operation of the AQP unless the FAA withdraws approval or unless the applicant withdraws or modifies the AQP. This phase requires the maintenance of the AQP-approved documentation and updated documentation of the data requirements for all curriculums.

2-21. DATA'S IMPACT ON CONTINUING OPERATIONS. Data will continue to be collected and analyzed by the applicant and the FAA as it was during phase IV activities.

2-22. QUALITY ASSURANCE. Applicants must pay particular attention to overall program quality. The FAA expects an AQP quality assurance program to identify needed changes in curriculum, courseware, and equipment, and to make these changes before an unwanted trend in reduced proficiency manifests itself. Continued validation of performance/proficiency data as it pertains to individual and crew proficiency, as achieved and maintained by all personnel, is particularly important.

SECTION 7. DOCUMENT AND REPORTING REQUIREMENTS

2-23. OVERVIEW. The approved AQP documentation establishes the applicant's regulatory requirements for the particular training program. This fact makes it imperative that the applicant develops a document structure that is organized and standardized. The structure must ensure that the information contained within the AQP documents will be used and translated down to the lowest level training guidance. It must allow the applicant's entire organization to easily access

and use the contents. It is important to draw a distinction between the AQP process and the required FAA documentation each applicant must provide to ensure regulatory compliance. The FAA has established a minimum listing of AQP documentation. The applicant will want to develop other more specific materials that ensure the approved AQP information distills to all training and evaluation guides.

a. FAA-Required Documentation. Each document contains unique information integral to the AQP that will be used when developing subsequent curriculums. The documents, once developed, will require periodic updates and, therefore, are subject to the revision control process discussed in Chapter 4. These documents should be submitted to the FAA in electronic format:

(1) The application.

(2) The task analysis.

(3) The qualification standards.

(4) The instructional systems development methodology.

(5) The curriculum outlines.

(6) The I&O Plan.

b. Document Structures. Figure 2-8 provides an example of an AQP document structure. It is not required that an applicant follow this structure. However, the document structure that is adopted must easily identify the location of the AQP documents and more specifically, the required AQP information. If the AQP documentation is part of a subset of other manuals, a method should be developed to identify the manual and the specific AQP document that it contains.

c. Annual AQP Report. AQP requires that each AQP certificate holder prepare an annual report for the FAA (see Appendix C for specific requirements). This report is based on the certificate holder's analysis of the data that is collected during training and at strategic points (validation/evaluation gates) in each curriculum and maintained in the PPDB. AQP requires data collection and analysis in order to establish and maintain quality control of curriculums for crewmembers, instructors, and evaluators. The annual AQP report should summarize the lessons learned and adjustments made to the curriculum(s) during the reporting period. The report should also include projected or proposed changes to the curriculum(s) based on the certificate holder's current analysis. The actual adjustments made to the AQP are reflected in revisions to the approved AQP documents. The report should be submitted to the FAA no later than 60 days past the end of the report period. The reporting period is usually based on the approval date for a particular curriculum in either phase IV or V. During AQP development, particularly for multiple fleet operators, with different approval dates for multiple curriculums, the reporting period may be modified (as agreed upon by the FAA and the certificate holder). Once the certificate holder has all its fleets and curriculums into phase V, the reporting period can be fixed

into a particular cycle. Copies of the report should be distributed to the POI and AFS-230 at least 2 weeks prior to the annual AQP review meeting.

d. Annual AQP Review - Phases IV and V. An annual AQP review meeting between the FAA and the certificate holder should be held to coincide with the submission of the annual AQP report in phases IV and V. The purpose of the meeting is to formally discuss the results of the certificate holder's data analysis, program revisions, future revisions and the analysis of the data that is submitted to the FAA. Below is a listing of suggested agenda items for a Phase IV and V review:

(1) Data Management.

(a) Collection problems and fixes.

(b) Analysis - data reliability/validity/sensitivity.

(c) Data usefulness.

(d) Problem areas investigated.

(2) Data Collection Method/Tools.

(3) Data Analysis Methods/Tools.

(a) Review of annual report.

1 Qualification.

2 Continuing qualification.

3 Line check.

(b) Identified trends (positive and negative).

(c) Corrective measures.

(4) Program Critique Summaries.

(5) Recordkeeping. Do records consistently demonstrate qualification of crews and instructor/evaluators?

(6) I&O Plan Adherence.

(7) Modifications to the Program.

(a) Due to PPDB input.

(b) Due to other input.

1 Demographics.

2 Operational.

(8) Validity and Usefulness of Qualification Standards.

(9) AQP Maintenance Strategy - Is the Described Process Working?

(a) Any changes to the maintenance strategy.

(b) Currency of PPDB.

(10) Instructor Evaluator Programs.

(a) Inter/Referent rater reliability data.

(b) Question and answer observations summarized.

(c) Methods to maintain I/E Standardization.

(11) FAA Surveillance Findings.

(12) AQP Challenges and Difficulties.

(a) Progress towards phase III, IV, and V in other fleets.

(b) Special tracking.

(c) Seat substitution.

(d) Line oriented flight training (LOFT)/LOS scenarios for crewmembers.

(13) Use of Information from Related Programs, If Any (e.g., Flight Operational Quality Assurance (FOQA), Aviation Safety Action Prevention (ASAP), etc).

FIGURE 2-8.
DOCUMENT STRUCTURES CHART

Title
List of Effective Pages

Section I - All Organizational Standardized Area's
Application
Instructional Systems Development
Methodology
Implementation and Operations Plan

Section II - Indoctrination Training Curriculums
Curriculum Outline

Section III - Qualification Training Curriculums
Task Analysis
Qualification Standards
Curriculum Outline
Data Acquisition/Grading Forms

Section IV - Continuing Qualification Training
Curriculums
Curriculum Outline
Data Acquisition/Grading Forms

CHAPTER 3. AQP CURRICULUMS AND CERTIFICATION

SECTION 1. CURRICULUMS

3-1. BACKGROUND. The Advanced Qualification Program (AQP) requires three primary curriculums for each make, model, and series of aircraft (or variant), and each duty position. These curriculums are indoctrination, qualification, and continuing qualification. Figure 3-5 illustrates how traditional curriculums correlate to the AQP primary curriculums. In addition to primary curriculums, operational necessities may require secondary curriculums to fulfill particular needs. Secondary curriculums are transition, upgrade, and requalification (see Figure 3-6).

3-2. INDOCTRINATION CURRICULUM. An indoctrination curriculum consists of all training elements that will be learned and evaluated before an individual may begin a qualification curriculum. Indoctrination curriculum segments typically consist of ground training and evaluation. Two distinct areas of indoctrination ground training are:

a. Certificate Holder-Specific Training. This training acquaints crewmembers, dispatchers, instructors, evaluators, and other operations personnel with company policies, practices, and general operational knowledge. The subject matter of indoctrination includes elements that pertain to the certificate holder's methods of compliance with regulations and safe operating practices.

b. Duty Position-Specific Training. This training provides the basic aeronautical knowledge needed to enter the subsequent qualification curriculum. Weather, the regulations, security, some emergency, and hazardous material training (usually part of indoctrination) is partially certificate holder-specific and partially duty position-specific.

3-3. QUALIFICATION CURRICULUM. AQP requires a qualification curriculum for each duty position in each make, model, and series aircraft (or variant). Each Qualification Curriculum will include training, validation, and evaluation. The training activities include ground and flight training, operational experience, and may include special qualification. Figure 3-1 illustrates the relationship between training activities and validation points. If the training is to result in airman certification or the addition of category, class, instrument, or type ratings, curriculum segments must explicitly identify the training and evaluation strategy to be used in place of the prescribed practical test requirements of Title 14 of the Code of Federal Regulations (14 CFR) parts 61, 63, or 65. The applicant must show, to the FAA's satisfaction, that the proposed AQP training and evaluation strategy will ensure individual competency that equals or exceeds the practical test standards (PTS) and that each person certificated through an AQP has demonstrated satisfactory proficiency in the integration of technical and crew resource management (CRM) skills.

a. Training Activities.

(1) Ground Qualification Training Activities. To be qualified for a particular duty position, a person will receive job-specific ground training. This training typically includes

general operational subjects, technical systems, system and procedures integration, and emergency-type training. Ground qualification culminates in a systems knowledge validation session that may take the form of a traditional oral examination or may incorporate another means of systems knowledge validation (e.g., computer-based, written, etc), as approved by the FAA.

(2) Simulation/Flight Qualification Training Activities. Each AQP includes curriculum segments for training, validation, or evaluations, as appropriate in Flight Training Devices (FTD) and simulators. The use of FTDs for training and evaluation is encouraged. However, the maneuvers validation must be accomplished in a full flight simulator that has been approved for its intended use. Training and evaluation in an aircraft is discouraged, but may be approved by the FAA on a case-by-case basis.

(3) Special Qualification Training. Curriculum segments may include special purpose training. These are portions of ground or flight training that has specific application to crewmembers who are in international operations or for introduction of new flight operations, such as Category III (CAT III) approaches. Special purpose training and validation may initially be a separate curriculum segment that is later integrated into ground and flight training segments.

b. Validation/Evaluation/Remediation. In AQP, validation is a determination that the training produces the required results as identified in the qualification standards and that the individual has met the performance objectives of the training module. Except for the Qualification Curriculum Maneuvers Validation session, additional training may occur during a validation session to ensure achieving the training-to-proficiency objectives. An evaluation is an appraisal of an individual to ascertain whether the standards required for a specified level of proficiency has been successfully demonstrated. Interrupting the evaluation session for training is not permitted. Both validation and evaluation are assessments that the proficiency objectives of the training module have been met and the individual can proceed to the next level of training or line operations. Figure 3-2 contains a table that summarizes the validation/evaluation gates and the associated remediation.

(1) Systems Knowledge Validation. This is an assessment of an individual's technical systems knowledge. The intent of the systems knowledge validation session is to ensure an individual's systems knowledge is at an appropriate level before progressing into the next training phase. Systems knowledge validation may be accomplished by a written, electronic or oral exam. If a written or electronic test system is used, an overall score of 80 percent or better, corrected to 100 percent, would be an acceptable validation. An overall score of less than 80 percent will require retraining and another complete test. A failure of an individual test module or sub-section, with an 80 percent or better overall score, only requires retraining and retesting of the specific module. Consideration should be given to establishing a maximum number of modules or sub-sections that if failed constitute an overall failure of the validation.

(2) Procedures Validation. This is an assessment of an individual's systems integration knowledge and skill. This validation addresses the individual's ability to assimilate system and procedural knowledge into the appropriate execution of procedures. This validation session should take place in an FTD or a simulator. The intent of the procedures validation session is to

ensure an individual's systems and procedural knowledge and skill is at an appropriate level before progressing into the flight simulator training phase. There is no established requirement that the systems and procedures validation be accomplished sequentially. It is the prerogative of each certificate holder to develop an evaluation system that works for them. For example, the systems validation could take place in two parts. The first part may be a written exam administered at the conclusion of ground school. The second stage could be an oral conducted at the conclusion of procedures training, before the maneuvers validation or before the line operational evaluation (LOE). Validation is accomplished when it is verified that the individual is trained to proficiency.

(3) Maneuvers Validation. This validation addresses the individual's proficiency in the execution of maneuvers. It must take place in a simulator. For a qualification curriculum, crewmembers are expected to have reached a satisfactory level of proficiency in the maneuvers prior to the validation event. Qualification maneuvers validation should not allow more than two repeats of any one maneuver or one repeat of any two maneuvers. A debriefing of why the maneuver(s) was unsatisfactory is allowed, but the repeats must occur with no training, practice, or coaching. If the crewmember fails to demonstrate proficiency in the time constraints of the simulator session, an additional training session is required. After additional training, the individual need only repeat the maneuvers that were unsatisfactory. Failure of the maneuvers validation or failure to complete the maneuvers validation during the scheduled simulator period does not result in the issuance of FAA Form 8060-5, Notice of Disapproval of Application.

(4) LOE. This evaluation addresses the individual's ability to demonstrate technical and CRM skills appropriate to fulfilling job requirements in a full mission scenario environment. The intent of an LOE is to evaluate and verify that an individual's job knowledge, technical skills, and CRM skills are commensurate with AQP qualification standards and that the individual is qualified to begin the Operating Experience (OE) portion of the qualification curriculum. LOE is considered a jeopardy event and a failure is reported to the FAA. If the LOE is to result in certification, a failure will result in the issuance of FAA Form 8060-5. Grading of an LOE is at the event set level. LOE success criteria is listed below:

(a) An LOE with more than 25 percent of the event sets graded unsuccessful would constitute a failure of the LOE and will require remedial training and another LOE.

(b) For LOEs with 25 percent of the event sets or fewer graded unsuccessful, repeats may be permitted at the end of the LOE session, if time permits and if it is possible to recreate the conditions similar to the original event set for the repeat. For example, if an LOE has five, six, or seven event sets, only one set may be repeated. If an LOE has between 8 and 11 event sets, two may be repeated. No event set can be repeated more than once. A debriefing of why the event set(s) is unsatisfactory is allowed, but the repeat must occur with no training, practice, or coaching. If any repeated event is unsatisfactory, remedial training and another complete LOE evaluation is required.

NOTE: Regardless of number of events sets, unsafe individual or crew performance that would result in significant damage, hull loss, or loss of life (e.g., crash) during an LOE constitutes a failure of the LOE.

NOTE: An aircrew program designee (APD) or FAA inspector must administer all flight crewmember qualification curriculum LOEs. A check airman can administer continuing qualification LOEs.

(5) Operating Experience (OE). OE curriculum segments are integral to qualification curriculums. OE provides hands-on experience in performing the duties of a newly assigned position under the supervision of a current and qualified evaluator (check airman). OE is conducted during actual flight operations. Operating experience is complete when the individual is recommended for a line check.

(6) Line Check. Captains receiving this evaluation are assessed for their proficiency in the duty position. Successful completion of the line check verifies that the individual is adequately trained and is capable of performing the duties and responsibilities of pilot-in-command (PIC). If any task is unsatisfactory, the individual must receive remedial training on that task, additional operating experience if necessary, and possibly another line check. If a pilot receives an unsatisfactory overall performance rating on a line check, the pilot must be removed from continued line operations until the approved remediation has been successfully completed.

c. Planned Hours. All curriculums will include planned hours for ground training, flight training, evaluation, and operating experience. Planned hours represent the estimated amount of time (as specified in a curriculum outline) that it takes an average student to complete a segment of instruction (to include all instruction, demonstration, practice, and evaluation, as appropriate, to reach proficiency). Planned hours replace the programmed hours associated with traditional programs. Planned hours enable the FAA and the applicant to schedule their personnel resources more efficiently and provide a baseline for curriculum adjustments. The sum of planned hours is not used by the FAA as a basis for program approval, review, or compliance assessment. Planned hours can be shown on the course footprint that is part of the curriculum outline. Figure 3-3 provides an example of a course footprint with planned hours.

FIGURE 3-1.
FLIGHT CREWMEMBER AQP TRAINING, VALIDATION, AND EVALUATION

Activity	Device	Purpose	Can it be Interrupted?	Training/ Validation or Evaluation	Sequencing of Events
Ground Training	Classroom or Computer Based Instruction, and Training Devices	Indoctrination and Systems Training	Yes	Training & Validation	Syllabus
Maneuvers and Procedures Training	Flight Training Device & Simulator	Aircraft Maneuvers and Operational Procedures	Yes	Training & Validation	Isolated Maneuvers and Procedures. Logical Specific Sequencing of Events
Special Purpose Operational Training (SPOT)	Flight Training Device & Simulator	Focuses on CRM Skills, Differences Tng., Windshear Tng., Special Qualification	Yes	Training	Isolated Maneuvers and Procedures. Logical Specific Sequencing of Events
Line Oriented Flight Training (LOFT)	Flight Training Device & Simulator	Crew Oriented Training (CRM) in Preparation for LOE	No Except To Begin Different Scenarios	Training	Logical Sequencing of Events Within Varying Length Scenarios
Line Operational Evaluation (LOE)	Flight Training Device & Simulator	Evaluate the training and qualifications of the crewmembers	May Be Segmented to Condense Distances as in International Scenarios	Evaluation	Specific Flight Scenario From Takeoff to Landing
Operating Experience	Aircraft	Consolidation of knowledge & skills in a operational environment	Yes	Experience	Routine Flight Operations
Initial Line Check	Aircraft	To verify a crewmember's ability to satisfactorily perform duties & responsibilities	No	Evaluation	Routine Flight Operations
CQ Line Check	Aircraft	To evaluate crew proficiency and their knowledge, skills, and ability to operate effectively as part of a crew.	No	Evaluation	Routine Flight Operations

FIGURE 3-2.
AQP VALIDATION/EVALUATION TABLE

Gate	Indoctrination Curriculum	Qualification Curriculum	Continuing Qualification Curriculum	Evaluation Media
System Knowledge Validation	80% or Greater corrected to 100%, < 80% retest	80% or Greater corrected to 100%, < 80% retest	80% or Greater corrected to 100%, < 80% retest	Written, Oral, or Electronic Testing System (ETS)
Procedures Validation		Train to Proficiency		As Approved
Maneuvers Validation		2 Repeats of One Maneuver, or 1 Repeat Of Any 2 Maneuvers*	Repeats Allowed Within Training Period	Approved Simulation Device
LOE		Grading By Event Set 5, 6 Or 7 Event Sets - Repeat 1 Event Set –8 or more Event Sets Repeat - 2 Event Sets **	Grading By Event Set 5, 6 or 7 Event Sets - Repeat 1 Event Set 8 –or more Event Sets Repeat - 2 Event Sets **	Approved Simulation Device
Operating Experience		Meets Approved Number of Supervised Cycles or Hours and Recommended for Initial Line Check		Aircraft (Actual Line Operations)
Line Check		If Any Task Unsatisfactory, Remedial Training Needed, Additional Operating Experience if Needed, and Another Line Check as Recommended by the Evaluator	If Any Task Unsatisfactory, Remedial Training Needed, Additional Operating Experience if Needed, and Another Line Check as Recommenced By the Evaluator	Aircraft (Actual Line Operations)

* For any repeat in a qualification maneuvers validation, qualification LOE or CQ LOE, no training, practice, or coaching is permitted. Training repeats are allowed in a continuing qualification maneuvers validation and are not counted as an evaluation repeat.

** Failure to meet the required level of proficiency during an LOE or line check will result in retraining, reevaluation, and will require special tracking. Regardless of number of events sets, unsafe individual or crew performance that would result in significant damage, hull loss or loss of life (e.g., crash) during an LOE constitutes a failure of the LOE.

FIGURE 3-3.
EXAMPLE OF AQP FLIGHTCREW QUALIFICATION CURRICULUM FOOTPRINT

Day 1	Day 2	Day 3	Day 4	Day 5		
Welcome :30 Intro :30 CBT 5:00 TT 6:00	CBT 5:00 Review 1.00 TT 6.00	CBT 5:00 Review 1.00 TT 6.00	CBT 5:00 Performance 1.00 TT 6.00	Evacuation 3:00 Ditching 3:00 TT 6:00	Day Off	Day Off
Day 6	Day 7	Day 8	Day 9	Day 10		
CBT 5:00 Setup Lect. 1.00 TT 6.00	CBT 3:00 FTD Brief 1.00 FTD # 1 2.00 TT 6.00	CBT 5:00 Review 1.00 TT 6.00	CBT 3:00 FTD Brief 1.00 FTD # 2 2.00 TT 6.00	SYSTM VAL Testing 1:00 Flt Ops Brf. 4:00 Debrief :30 TT 6:30	Day Off	Day Off
Day 11	Day 12	Day 13	Day 14	Day 15		
Sys Rev 1:00 FTD Brief 1.00 FTD # 4 4.00 TT 6.00	FTD Brief 1:30 FTD # 5 4.00 Debrief 1:00 TT 6.30	FTD Brief 1:30 FTD # 6 4.00 Debrief 1:00 TT 6.30	FTD Brief 1:30 FTD # 7 4.00 Debrief 1:00 TT 6.30	Proc Val FTD Brief 1:30 FTD # 8 4.00 Debrief 1:00 TT 6.30	Day Off	Day Off
Day 16	Day 17	Day 18	Day 19	Day 20		
Sim Brief 1:30 Sim # 1 4.00 Debrief 1:00 TT 6.30	Sim Brief 1:30 Sim # 2 4.00 Debrief 1:00 TT 6.30	Sim Brief 1:30 Sim # 3 4.00 Debrief 1:00 TT 6.30	Sim Brief 1:30 Sim # 4 4.00 Debrief 1:00 TT 6.30	MAN VAL Sim Brief 1:30 Sim # 5 4.00 Debrief 1:00 TT 6.30	Day Off	Day Off
Day 21	Day 22	Day 23	Day 24	Day 25		
Loft Brief 1:30 Loft # 1/Spot 4.00 Debrief 1:00 TT 6.30	Loft Brief 1:30 Loft # 2/Spot 4.00 Debrief 1:00 TT 6.30	Loft Brief 1:30 Loft # 3/Spot 4.00 Debrief 1:00 TT 6.30	Loft Brief 1:30 Loft # 4/Spot 4.00 Debrief 1:00 TT 6.30	LOE Brief 1:30 LOE 4:00 Debrief 1:00 TT 6:30	Day Off	Day Off
Day 26	Day 27	Day 28	Day 29	Day 30		
IOE	IOE	IOE	IOE	IOE		
Day 31 IOE	Day 32 Line Check	SYST VAL - Systems Validation PROC VAL - Procedures Validation MAN VAL - Maneuvers Validation LOE - Line Operational Evaluation Spot - Special Purpose Operations Training		CBT – Computer-based training FTD - Flight training device Sim - Full flight simulator LOFT - Line oriented flight training IOE - Initial operations experience		

3-4. CONTINUING QUALIFICATION CURRICULUM. A continuing qualification curriculum provides the means for fully qualified individuals to maintain their proficiency in their duty positions and aircraft assignments. Continuing qualification applies to all persons subject to an AQP, including instructors and evaluators. AQP requires a continuing qualification curriculum for each duty position in each make, model, and series aircraft (or variant).

a. First-Look Maneuvers. For AQP, first-look maneuvers are applicable only to the continuing qualification curriculum and the single visit training program (SVTP). First-look

maneuvers are those maneuvers that are identified as likely to be sensitive to loss of proficiency due to infrequent practice. The principal purpose of first-look maneuvers is to test the retention of proficiency of the flightcrews in performing these maneuvers over the evaluation cycle. First-look maneuvers are an AQP requirement whenever the evaluation period exceeds the checking/training interval of a traditional training program. However, a first-look maneuver is a valuable tool and should be considered regardless of the length of the evaluation period. For example, first-look may be employed as a means of validating that currency items are performed in line-operations with sufficient frequency that proficiency is being maintained. First-look maneuver proficiency assessment is graded using the same measurement methodology and rating criteria used in maneuvers validation. An AQP-qualified pilot instructor may accomplish first-look proficiency assessment. However, if an applicant proposes to request maneuvers validation credit for critical first-look maneuvers, the applicant must ensure that the first-look proficiency assessment is accomplished by an AQP-qualified evaluator, rather than by an instructor. There are four considerations for the first-look maneuver proficiency assessment: the composition of the maneuvers list, the strategy for testing the maneuvers, administering the test, and remediation.

(1) List of Maneuvers. The listing of first-look maneuvers is developed by the applicant and approved by the FAA Extended Review Team (ERT). First-look items are performed, graded and analyzed to validate that flightcrews can maintain proficiency in these items between training intervals. These may include certain items given a designation of "Currency" in the qualification standard, if any, in order to facilitate initial validation that these items are being performed outside of training with sufficient frequency that proficiency is being maintained.

(2) Testing Strategy. The testing strategy that the applicant develops for first-look is part of the Implementation and Operations Plan (I&O Plan). An ideal approach would be to have a listing of several objectives that will be sampled under a controlled sampling technique that will ensure that each of the items are assessed during the evaluation period. It is important to remember that first-look testing is not as much an assessment of an individual's skills, as it is a measure of the collective retention of proficiency by flightcrews. Individual assessment occurs in maneuvers validation and LOE. The data that is collected from first-look testing is used for trend analysis and as a tool to validate the AQP program's overall effectiveness.

(3) Administration. First-look items must not be briefed in advance of the first execution of such maneuvers. Proficiency data must be collected before the repeated execution of any such first-look item during training in a flight simulator. There are several options as to when the first-look maneuver testing should be conducted. For example, a first-look maneuver could be introduced as the first event of a simulator training session addressing maneuvers. Another option would be to allow the flightcrew an opportunity to "warm up" to the simulator by doing other pre-briefed maneuvers prior to first-look. Other options would be to make it part of an event in a LOFT or SPOT. The common element in all such options is that proficiency is assessed the first time the first-look item occurs in training.

(4) Remediation. First-look maneuver proficiency assessment is considered a no-jeopardy event, subject to the requirement that any maneuvers unsuccessfully accomplished be trained to proficiency prior to the LOE.

b. Training Activity. Continuing qualification curriculums should have a proper balance of training and evaluation. For a national flight crewmember continuing qualification curriculum profile, see Figure 3-4. Continuing qualification curriculums should typically outline a uniform timetable of the following activities:

(1) Continuing Qualification Ground Training Activities. Continuing qualification training includes ground instruction and evaluation for crewmembers, dispatchers, instructors, evaluators, and other operations personnel. This training includes a review of the information covered in indoctrination and qualification training, updated as is appropriate.

(2) Continuing Qualification Flight Proficiency Training. Pilots, flight engineers, and those instructors and evaluators who conduct flight training or flight evaluations will complete proficiency training designed for their respective duty position. This training may be conducted in an approved flight-training device or flight simulator. Training in an aircraft is discouraged, but may be approved by the FAA on a case-by-case basis. Flight proficiency training permits pilots and engineers to experience and practice the procedures and maneuvers that are not normally encountered in day-to-day flight operations, such as alternate, abnormal, and emergency flight events. The train-to-proficiency strategy must include enough practice to ensure that skills are maintained over the entire training interval.

(3) Special Qualification Training. These training segments are used for the same purposes as in qualification curriculums.

c. Validation/Evaluation/Remediation. Continuing qualification must include validation/evaluation in all events and major subjects required for original qualification. This requirement is met through proficiency evaluations and line checks.

(1) Maneuvers Validation. The maneuvers validation session in the continuing qualification curriculum allows assessment and attainment of technical proficiency in the training program prior to evaluation in the LOE. In continuing qualification curriculum training, repeats are allowed and are not counted as an evaluation repeat. In a continuing qualification curriculum, maneuvers validation must be successfully completed within the time limits of the standard company scheduled simulator session (national norm is 2 hours per crewmember) or an additional training period is required. If an individual requires additional training periods to be able to demonstrate proficiency, consideration should be given to placing the individual in special tracking.

(2) LOE. The LOE is the primary proficiency evaluation. The LOE is conducted in a simulation device approved for its intended use in the AQP. Under extenuating circumstances, the AQP proficiency evaluation may be accomplished in an aircraft, subject to FAA approval. The purpose, administration, and remediation strategy for the continuing qualification curriculum LOE is the same as for a qualification curriculum.

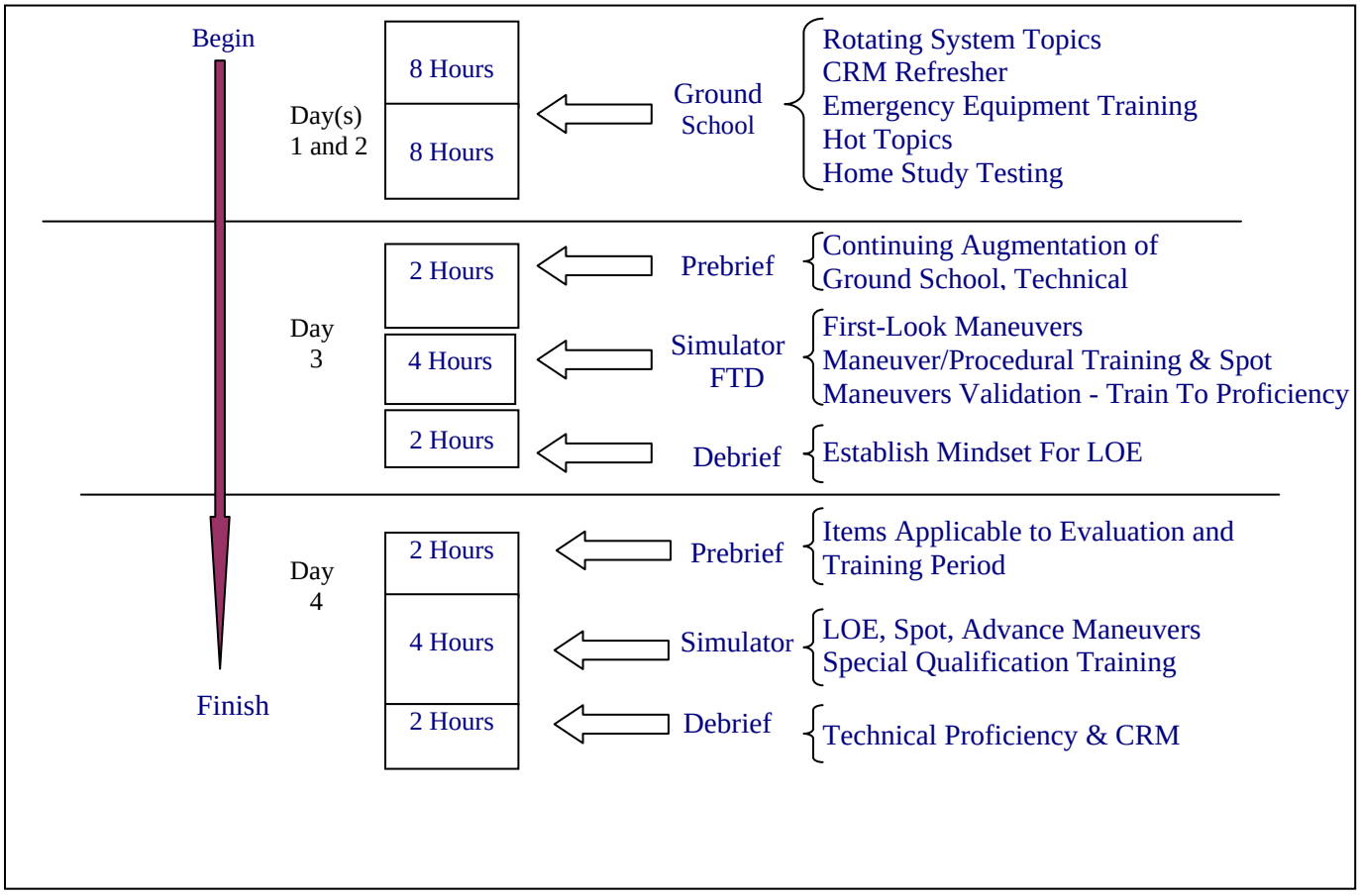
(3) Line Check. The PIC annual line check is considered a proficiency assessment, conducted by an evaluator, during actual 14 CFR part 121 or 135 revenue flight operations. It also may be conducted during an operationally oriented flight such as ferry flights or proving flights. During line checks, each person performing duties as a PIC, second-in-command (SIC), or flight engineer must be individually evaluated as to:

- Proficiency in the particular aircraft, crew position, and type of operation
- Skill and ability to operate effectively as part of a crew

If a pilot receives an unsatisfactory overall performance rating on a line check, the pilot must be removed from continued line operations until the approved remediation has been successfully completed.

NOTE: To conduct a line check, the evaluator must hold the airman certificates and ratings equal to the PIC.

FIGURE 3-4.
EXAMPLE OF AN AQP FOUR-DAY FLIGHTCREW CONTINUING QUALIFICATION CURRICULUM FOOTPRINT



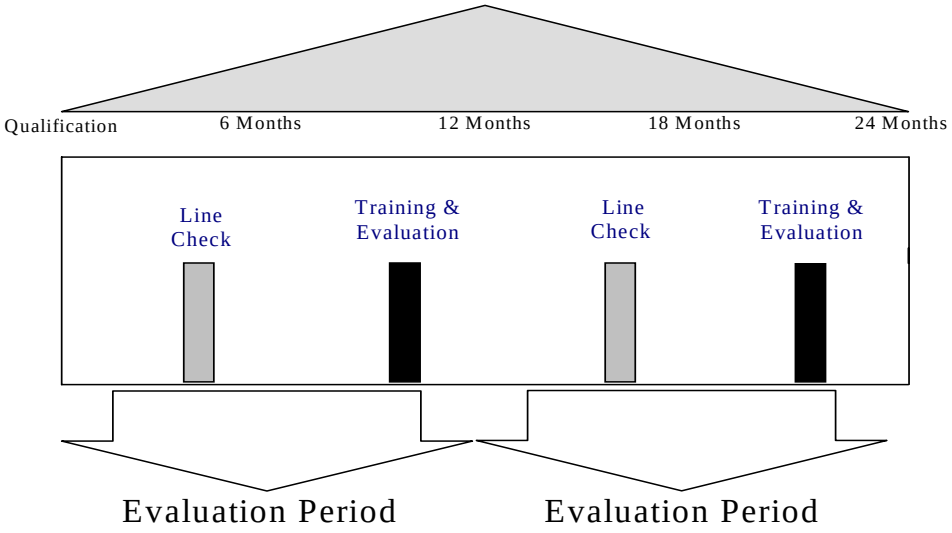
d. Flight Crewmember Recent Experience. The applicant's AQP documentation should show compliance with either the recent experience requirements in part 121, section 121.439 or alternative equivalent currency activities under AQP. The currency requirements, if not met during line operations, may be re-established through a flight currency module specified in the continuing qualification curriculum. Currency activities for instructors and evaluators will be specified in each AQP. These instructor and evaluator activities should enable each instructor or evaluator to maintain proficiency in teaching and evaluating the events he/she is authorized to perform.

e. Cycles and Evaluation Period. The time period during which all proficiency objectives are trained, validated, or evaluated for all crewmembers is called a "Continuing Qualification Cycle." Figure 3-5 illustrates a continuing qualification cycle. The initial approval for a continuing qualification cycle is no more than 24 months in duration, divided into two 12-month evaluation periods. All critical proficiency objectives are accomplished during each evaluation period, and all currency proficiency objectives are accomplished during each continuing qualification cycle. It is important to remember that criticality and currency do not pertain solely

to terminal proficiency objectives (TPO), but can also apply to supporting proficiency objectives (SPO), dependent on the applicant's task factors analysis. Refer to the chart in Figure 2-3.

(1) Schedule. The continuing qualification cycle footprint should provide sufficient detail. Elements of ground training activities, flight training activities, proficiency and line checks, and currency activities are specifically identified. The schedule for the cycle should specify the period between each type of activity. Developing a continuing qualification activity schedule involves selecting, revising, and arranging modules (with related proficiency objectives) from indoctrination and qualification curriculums. These modules are regularly revisited to maintain both individual and crew proficiency. Each continuing qualification curriculum will identify the frequency of training sessions for each person qualified under an AQP.

FIGURE 3-5.
CONTINUING QUALIFICATION CYCLE



(2) Training Sessions. Each evaluation period must include at least one training session, but may include more. Initially, training sessions cannot be more than 12 months (plus or minus 1 month) apart.

(3) Line Check. For PICs, a line check must be scheduled in the calendar-month that includes the midpoint of the evaluation period. However, to allow flexibility, the line check may be completed during the month after or the month before the midpoint month.

(a) With the Administrator's approval, a no-notice random line check strategy may be used in lieu of the line check required by part 121, section 121.915(b)(2)(i). The certificate holder who elects to exercise this option must ensure the random line checks are administered so the flight crewmembers are not notified before the evaluation. In addition, the certificate holder must ensure that each PIC receives at least one random line check every 24 months. At a minimum, the number of random line checks administered each calendar year must equal at least 50 percent of the certificate holder's PIC workforce in accordance with a strategy approved by

the ERT for that purpose. In addition, the random line checks must be conducted over all geographic areas flown by the certificate holder in accordance with a sampling methodology approved by the ERT for that purpose.

(b) During the random line checks, each person performing duties as a PIC, SIC, or flight engineer for that flight must be individually evaluated to determine whether the person remains adequately trained and currently proficient with respect to the particular aircraft, crew position, and type of operation in which he or she serves, and the person has sufficient knowledge and skills to operate effectively as part of a crew. The evaluator must be a check airman, an APD, or an FAA inspector and must hold the certificates and ratings required of the PIC.

(4) Proficiency Evaluations. For PICs, SICs, flight engineers, and other persons covered by an AQP, a proficiency evaluation must be completed during each evaluation period. Typically, the proficiency evaluation will occur during a required training session; however, if more than one training session is completed during an evaluation period, the proficiency evaluation may be divided among training sessions or otherwise allocated to one or more such sessions.

f. Extensions. The FAA will consider approving extensions to the duration of continuing qualification cycle and evaluation period if evidence substantiates that the extension will maintain or increase the level of safety for that carrier. To obtain approval, an applicant must be able to show that individuals subject to the AQP are able to maintain their knowledge and skills under the already approved schedules. In addition, it must show that a rational basis exists for believing that no loss of knowledge, skill, or ability, which could compromise safety, will result from an extension. An extension will be allowed to continue, or an additional extension will be granted, if an operator's data analysis and an independent FAA evaluation verify that the extension is an appropriate means to maintain or increase an individual's level of competency.

NOTE: A continuing qualification cycle may be extended up to a maximum of 36 months.

g. Validation. The continuing qualification cycle and evaluation period are subject to continued demonstration of overall effectiveness. The demonstration will be dependent on the data submitted to the FAA by the participant and additional analysis accomplished by the participant. To ensure adequate individual and crew qualification, the participant must demonstrate that its AQP has the capacity to monitor individual proficiency.

h. Dual Qualification. An individual is deemed "dual qualified" if, during the continuing qualification cycle following an AQP proficiency evaluation, the individual performs flightcrew duties in that aircraft type after becoming qualified and operating another aircraft type during that same continuing qualification period. If maintaining qualification in more than one aircraft type in accordance with the definition of "dual qualification" above, the individual will have one aircraft type designated as "primary" and other aircraft types designated as "secondary."

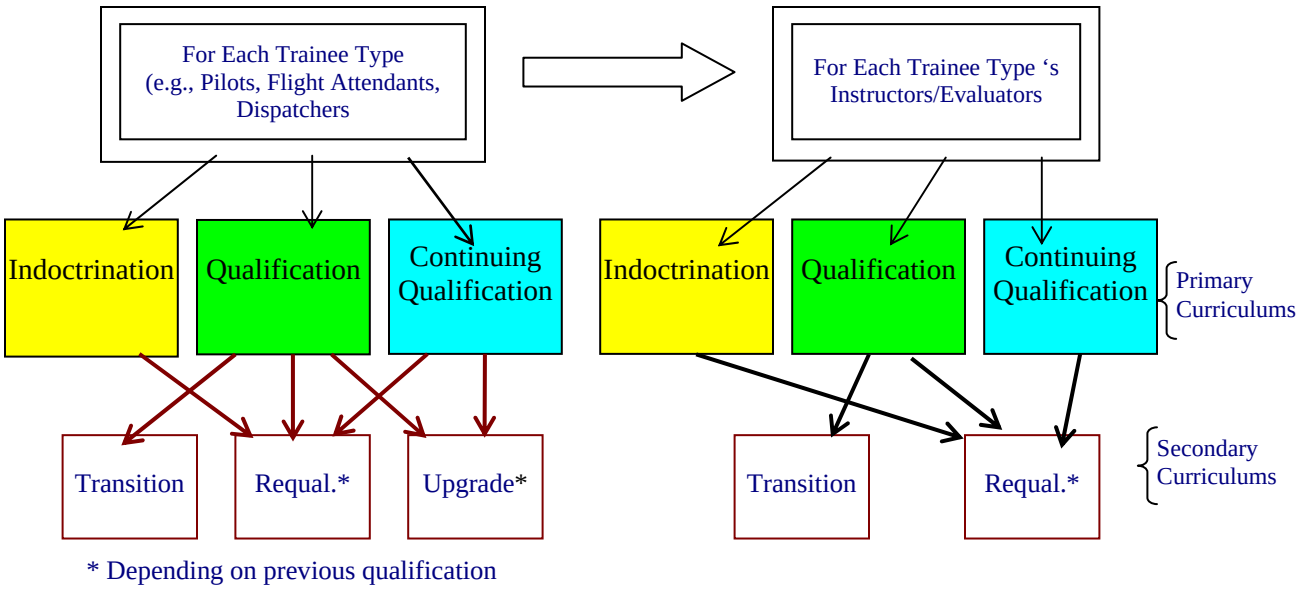
(1) Training Cycle. A person, who is qualified on more than one aircraft type, or in more than one duty position on different aircraft types, should be simultaneously enrolled in a separate continuing qualification curriculum for each assigned aircraft and duty position. For each aircraft type or duty position in which he/she is maintaining qualification, the individual must accomplish the corresponding AQP continuing qualification curriculum. Those training items that are not "fleet specific" in nature need only be addressed in the "primary" aircraft's AQP continuing qualification program.

(2) Line Check. In addition, the individual must accomplish at least one line check during the continuing qualification cycle in the "primary" aircraft. The individual should receive a line check on a different aircraft type each successive year so he/she is given a line check on all aircraft types prior to re-accomplishing a line check on a given aircraft type.

(3) Multiple Duty Positions. A person assigned simultaneously as a flight crewmember, instructor, and/or evaluator on the same aircraft, may be enrolled in a continuing qualification curriculum, which combines the activities necessary to maintain skill and proficiency in all duty positions.

3-5. SECONDARY CURRICULUMS. Developing a secondary curriculum entails selecting, revising, and arranging modules (with related proficiency objectives) from all three primary curriculums. In all cases, the TPOs, SPOs, and EOs must include CRM principles and include the use of line operational simulation (LOS) for training and evaluation. Figure 3-6 shows the relationship of primary AQP curriculums to the secondary curriculums.

FIGURE 3-6.
AQP SECONDARY CURRICULUMS



a. Transition Curriculum. This curriculum is applicable for an employee who has been previously trained and qualified in a specific duty position by the certificate holder and is being assigned the same duty position on a different aircraft. Under part 121, the new aircraft must be in the same aircraft group or the qualification curriculum must be used. In a transition curriculum, the same qualification standards apply as found in the qualification curriculum. However, the training received may be abbreviated, based on an analysis of the training/validation/evaluation requirements of the qualification curriculum compared to an assessment of the currency, knowledge, skills, and qualifications of the individual. In most cases, the training received would be from modules extracted from the qualification curriculum for that particular aircraft. For example, if both aircraft used the same Flight Management System (FMS), training may be tailored to be aircraft specific (weights, fuel burn, etc.) and proficiency validated through testing rather than requiring the student to sit through the entire FMS curriculum segment.

b. Upgrade Curriculum. This curriculum is for an employee who has been previously trained and qualified as either a SIC or flight engineer for the certificate holder and is being assigned as either a PIC or SIC, respectively, for the same aircraft type in which he or she was previously trained and qualified. Elements or training modules for this curriculum may be found in all three primary curriculums. In upgrade training, the same qualification standards apply as found in the qualification curriculum. However, the training received may be abbreviated, based on an analysis of the training/validation/evaluation requirements of the qualification and continuing qualification curriculums compared to an assessment of the currency, knowledge, skills, and qualifications of the individual. For example, if the individual is a current first officer instructor/evaluator already type-rated in the aircraft, the training/validation/evaluation requirements of continuing qualification followed by operating experience might be appropriate. Another example, if the individual is current in the aircraft as an SIC, proficiency in training modules such as systems, FMS, and emergency drills may be validated through testing. Other training such as seat dependent training, command authority, and CRM may be trained and evaluated using a combination of classroom and LOS methodology.

> **NOTE: Downgrade. Seat-dependent task training is required when a PIC is reassigned as an SIC on the same type aircraft. It may be appropriate to provide modules from several different secondary curriculums (i.e., transition and requalification) if the flight crewmember has never served as an SIC on that type aircraft. The training required when the downgrade is from PIC to SIC from one type aircraft to another type aircraft will depend on whether the crewmember was previously qualified as an SIC in that type. If previously qualified in the duty position and type, a requalification curriculum based on time away is appropriate. If only previously qualified in the duty position, transition is appropriate.**

c. Requalification Curriculum. This curriculum is for an individual who has not met the requirements of a continuing qualification curriculum, for whatever reason, and becomes unqualified for the duty position. The individual must be requalified under a secondary curriculum to resume serving in that duty position. An AQP applicant should establish non-qualification duration limits based on a currency analysis beyond which an individual would be

required to repeat some or all of the indoctrination and qualification curriculum in addition to the continuing qualification curriculum to requalify.

d. Refresher. This curriculum is for an individual who has not met the time requirements of consolidation. The individual must be requalified using this secondary curriculum to resume serving in that duty position.

SECTION 2. AIRMAN CERTIFICATION

3-6. GENERAL. AQP regulatory guidance provides an alternative practical means to certificate pilots, flight engineers, flight attendants, and aircraft dispatchers. AQP regulatory guidance also provides for the development of alternative training and evaluation for flight attendants and operations personnel.

3-7. AQP TRAINING AND EVALUATION FOR CERTIFICATION. An applicant for AQP certification must be eligible in accordance with the applicable requirements of parts 61, 63, or 65, except that an operator may develop an alternative training and evaluation strategy, as specified in the qualification standards and approved by the FAA. AQP training and evaluation strategies are used in place of the prescribed practical test requirements of parts 61, 63, and 65. The AQP training and evaluation proposed by the operator must be an equivalent or better measure of airman competence and operational proficiency than that provided by the practical tests prescribed in parts 61, 63, or 65.

3-8. COMPLETION OF THE QUALIFICATION CURRICULUM. An applicant for FAA airman certification under an AQP must successfully complete the appropriate qualification curriculum and apply for certification on FAA Form 8710-1, Airman Certificate and/or Rating Application.

a. Application. There is a signature requirement for airman certification under AQP on the back of the application form. It is the block entitled “Evaluators Record for Airline Transport Certificate/Rating Only.” Signature in the AQP block constitutes verification, by a competent authority, that all of the requirements under the specific provisions of a certificate holder’s AQP qualification program have been satisfactorily accomplished. In this instance, the competent authority is an aircrew program designee (APD), air transport pilot examiner (ATPE), training center evaluator (TCE) authorized by the FAA, or a qualified FAA inspector.

b. Demonstration of Individual Skills. Applicants for certification and/or qualification, including dispatchers and flight attendants, must show competence in required technical proficiency objectives and CRM/DRM in actual or simulated operational scenarios that assess both types of skills together.

CHAPTER 4. AQP APPROVAL AND DOCUMENTATION

SECTION 1. DOCUMENTATION REVIEW AND APPROVAL

4-1. OVERVIEW. This section establishes how the FAA reviews and grants approval, or withdraws approval, for all or part of an Advanced Qualification Program (AQP). Specific document content is discussed in Chapter 2.

a. Approval Authority. Except for the three items listed below, notification of approval for AQP documents and their revisions is a joint signature responsibility of the FAA Manager of Voluntary Safety Programs (VSP) and the principal operations inspector (POI), based on recommendations from the FAA Extended Review Team (ERT). The exceptions are:

(1) Application – VSP manager.

(2) Line operational simulation (LOS) scenario content -- POI signature approval.

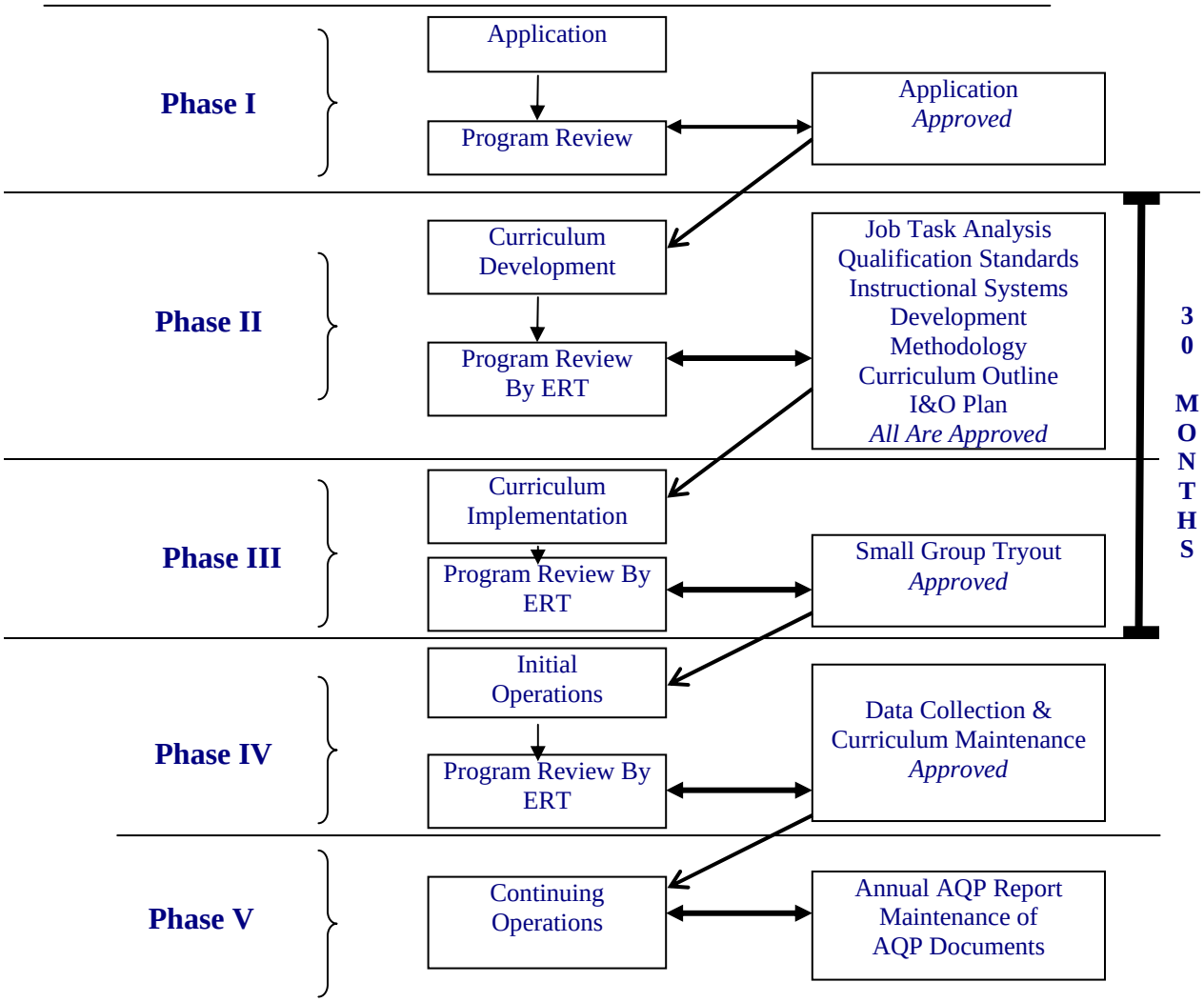
(3) Phase V curriculum outline revisions -- POI signature approval.

b. Approval Process. All AQP documents and subsequent revisions are reviewed by the ERT. The ERT reports to the VSP manager and to the POI with its recommendations. Based on the acceptance of the ERT recommendations, the VSP manager will originate, sign, and forward electronically a response letter to the POI for signature and delivery to the operator. The operator will ensure that the VSP manager and the POI receive copies of the approved material.

4-2. REVIEW PROCESS. Chapter 1 of this Advisory Circular (AC) discusses the roles and responsibility of the ERT personnel involved with AQP. The ERT prefers to interact closely with applicants as AQP documentation is developed. Experience has shown that is more efficient for the ERT to discuss plans and review drafts of document sections early in the development process.

4-3. APPROVAL PROCESS. Applicants develop, implement, and operate the AQP in five sequential phases. FAA approval of each phase marks the completion of that phase and entry into the next. Developing and implementing an AQP requires a commitment of resources for both the FAA and a certificate holder. The FAA and the certificate holder must use their resources in an effective and efficient manner. The FAA has established a transition time criterion in order to provide a clear delineation of FAA expectations regarding reasonable progress towards AQP implementation. Accordingly, continuation in AQP for applicants who do not initiate phase IV within the 30th month of phase I approval, as indicated in figure 4-1, will be subject to a review and analysis of their progression towards completing AQP. If circumstances do not warrant an extension, AQP and the Single Visit Training Program Plan approval (if applicable) may be withdrawn.

FIGURE 4-1.
FIVE PHASES OF AQP REVIEW AND APPROVAL



4-4. PHASE APPROVALS. After concluding a joint meeting with the potential applicant, the VSP manager and the POI/training center program manager (TCPM) will form the core ERT. The purpose of forming the ERT prior to accepting the phase I application is to have FAA resources available to help the applicant during the development process. In reviewing all phases of AQP development, the ERT will:

- Evaluate documents based on the guidelines in chapters 2 and 3 (see appendix 3)
- Provide suggestions for improvement, if appropriate
- Make recommendations to the VSP manager/POI/TCPM regarding approval

a. Phase I -- Initial Application. Approval of the initial application marks the certificate holder's formal entry into the AQP. The steps for the applicant are:

- Simultaneously submit the application electronically to the POI/TCPM and to the VSP manager
- Address comments and recommendations of the ERT

After determining that the applicant's submittal is satisfactory, the FAA Manager of Voluntary Safety Programs, in collaboration with the POI/TCPM, will approve the application. This approval will permit the applicant to proceed to phase II.

b. Phase II -- Curriculum Development. Curriculum development follows a sequential order of program development and submission: job task analysis, qualification standards, instructional systems development methodology, curriculum outlines, and Implementation and Operations Plan (I&O Plan). After all phase II-required documents have been reviewed by the ERT, the VSP manager and the POI/TCPM will issue a joint letter of approval to the applicant, with permission to begin phase III development.

c. Phase III -- Small Group Tryout. In this phase, the applicant will implement the AQP on a limited scale as defined in the I&O Plan. The applicant should provide the ERT a schedule of phase III activities at least 30 days before starting the events.

(1) Review and Surveillance. ERT activities in this phase will consist of observing, monitoring and participating in the AQP training programs. Particular emphasis will be placed on:

(a) Instructor/evaluator training and observation.

(b) Training scenarios.

(c) Validation.

(d) Line operational evaluation (LOE).

(2) Program Operation. Proficiency data, maintenance plan, quality assurance, data collection, analysis, and reporting will be evaluated for consistency and accuracy.

(3) I&O Plan Review. Once phase III is concluded, the applicant will provide the ERT with an updated I&O Plan. Based on the recommendations of the ERT, the VSP manager and the POI will approve the completion of phase III. Initial approval permits the applicant to execute the updated I&O Plan through one complete cycle of the continuing qualification cycle (usually 24 months). See chapter 2, section 5, paragraph 2-16 for the qualification and indoctrination curriculums (phase IV period).

NOTE: The POI and certificate holder must add an AQP entry (A034) into the automated operations specifications (OpSpecs).

d. Phase IV -- Initial Operations. In this phase, the applicant will implement the AQP as defined in the updated I&O Plan through one complete cycle of the curriculum.

(1) Review and Surveillance. ERT activities in this phase will consist of surveillance of AQP operations and analysis of data collection results. Joint ERT and applicant reviews will be conducted periodically. These meetings will provide both parties the chance to analyze results and discuss program concerns. At the midpoint in phase IV, the first annual report will be submitted to the ERT. A final joint review and annual report will be accomplished prior to phase IV Initial Approval expiration (usually 24 months). Focus areas for these reviews are (see Appendix 3):

(a) Data Management:

1 Collection.

2 Analysis.

3 Standardization.

4 Observations.

5 Additional training.

6 First-look.

7 Program feedback.

(b) Recordkeeping.

(c) Adherence to I&O Plan.

(d) Modifications to the program.

(e) Qualification standards that are reliable and valid.

(f) Maintenance of the AQP.

(g) Currency of the program audit database.

(h) Instructor/evaluator program.

(i) Special tracking.

(j) Transition to AQP (non-AQP fleets)

(2) Once the final joint review has been completed, the applicant will update the I&O Plan to include the changes recommended by the ERT. The successful completion of this phase, and approval of the commensurate revisions to the approved AQP documents and reports, will

qualify an applicant for entry into the final phase of the AQP process: phase V, Continuing Operations. Based on the recommendations of the ERT, the VSP manager and the POI will approve the completion of phase IV. The POI and the carrier will then modify the previously issued OpSpec paragraph A034 to include the phase V approval date.

e. Phase V -- Continuing Operations. In this phase, FAA oversight of the AQP is maintained under an FAA surveillance program. The certificate holder will maintain the AQP through documentation changes, program revisions, data analysis, and will continue to submit monthly data and an annual AQP report.

4-5. METHOD OF GRANTING APPROVAL.

a. Initial (Phase IV) or Provisional (Phase III). The VSP manager and the POI will grant initial phase IV AQP approval by a joint signature letter. For Title 14 of the Code of Federal Regulations (14 CFR) part 142 training centers, the VSP manager and the TCPM will grant provisional phase III AQP approval by a joint signature letter. Copies of the approved curriculum documentation and the approval letter are maintained by the POI at the certificate holding district office (CHDO) and the VSP manager. Copies of a training center's provisionally approved curriculum material is maintained by the TCPM, the VSP manager, and the participating air carriers' Flight Standards District Office (FSDO). The approval letter will include at least the following information:

(1) The specific identification of the curriculums for an AQP air carrier or training center curriculum segments, initially or provisionally approved, including a list of effective pages (LOEP) and revision control dates (date of revision for any page).

(2) A statement that initial or provisional approval is granted, and for initial approval, the effective and expiration dates.

(3) Any specific conditions affecting the approval.

(4) A requirement that the applicant provide the FAA with advanced notice of scheduled activities so evaluations may be planned.

b. Final Approval. Based on the results of evaluations accomplished during phase IV, the period of initial approval, the VSP manager and the POI will grant or deny final approval of an AQP. Final approval is accomplished with a joint signature approval letter and by stamped endorsement by the POI of the AQP document's LOEP. Copies of the approved curriculum documentation and the approval letter are maintained by the POI at the CHDO, the VSP manager, and at the location designated by the participant as its principal training site.

(1) Stamped Approval Endorsement or Acceptable Substitute. For initial and final approval, and revisions thereafter, the original LOEP of all AQP Program Audit Database (PADB) documents are stamp-approved, dated, and signed by the POI. The approval stamp should be a duplicate of the following:

FAA FINAL APPROVAL
OFFICE DESIGNATOR:
EFFECTIVE DATE:
NAME:
SIGNATURE:

NOTE: As approved changes are made to AQP PADB documents, the "Final Approval" endorsement will be re-accomplished on each LOEP.

(2) Approval Letter. All letters of final approval will be a joint signature letter usually initiated by AFS-230 and signed by the VSP manager and the POI. The letter will specifically identify the subject curriculums, contain a statement that "final approval is granted," and provide the effective date of approval. The final approval does not expire.

4-6. REVISION CONTROL PROCESS. The development and maintenance of an AQP necessitates revisions to documents. Due to the composition and geographic location of the ERT, it is imperative that a systematic revision process be followed.

a. Revisions. AQP document revisions are submitted to the VSP manager and the POI. In phases II through IV, the revision is reviewed by the ERT and approved using the notification process for the curriculum phase identified in Figure 4-1. The process is identical in phase V, except that review and approval of revisions to the curriculum outline are made directly by the POI. Copies of all revisions in all phases, including the curriculum outline, will be provided to both the VSP manager and the POI. Each revision must indicate which AQP documents are being revised, and must include the following items:

(1) A brief synopsis of each change and what pages/items are affected.

(2) Change bars or acceptable substitute identifying the text/chart that has been changed.

(3) The date of the revision and revision number on each page or graphic.

(4) The LOEP.

NOTE: If an operator chooses to integrate the required AQP documents into an established manual structure, each document's location must be identified and each revision request must identify the AQP document that is being revised and which manual contains the document.

b. Implementation. A revision to an approved portion (initial or final) of the AQP cannot be implemented until the applicant receives FAA approval.

SECTION 2. WITHDRAWAL OF APPROVAL

4-7. GENERAL. The FAA may withdraw initial, provisional, or final approval at any time the AQP is not in regulatory compliance, does not provide for safe operations, does not effectively prepare personnel to meet qualification objectives, or when the required data is not being provided or maintained. Before withdrawing approval, the FAA will make reasonable efforts to convince an applicant to correct the deficiencies.

4-8. INITIAL OR PROVISIONAL. The FAA will withdraw initial or provisional approval by letter. The letter will identify the affected curriculums, state the reasons for the withdrawal, and state the effective date of the withdrawal. An applicant who receives a letter of withdrawal may revise or refine the curriculum and resubmit it for initial or provisional approval.

4-9. FINAL APPROVAL. The FAA will withdraw approval by letter. The letter will identify the affected curriculums, state the reasons for the withdrawal, and state the effective date of the withdrawal (except in an emergency, not less than 7 days after receipt of the letter). The letter will advise the certificate holder that withdrawal may be appealed and provide instructions on how to appeal.

4-10. APPEAL WITHDRAWAL OF FINAL APPROVAL. An operator should petition the Director of Flight Standards Service (AFS-1) for reconsideration within 30 days after receiving withdrawal notification. The petition should be in writing and should explain in detail why the operator believes the withdrawal should not occur.

a. Denial of Appeal. The Director may immediately deny the petition after considering all relevant information presented if the Director believes that an emergency exists that directly affects aviation safety. In this case, the Director will inform the operator, by letter, of the decision to deny the appeal due to the existence of an emergency. The letter will state that an emergency exists and describe the deficiencies and the actions necessary to correct them.

b. Stay of Withdrawal. If the Director does not believe that an emergency exists, the Director shall carefully consider both the operator's petition for appeal and the FAA's reason for withdrawal of approval. In this case, the operator's petition, provided it goes out within 30 days, stays withdrawn, and the operator may continue to use the AQP curriculum pending the decision of the Director. The Director may find it necessary to conduct additional evaluations of the operator's AQP.

c. Director's Final Decision. In any case, the Director will make a final decision within 60 days of receiving the operator's petition. The Director may rescind or modify the letter of withdrawal or uphold the withdrawal. If the decision is to modify or uphold the withdrawal, the operator will be notified by letter. The letter will contain the reasons for denying all or part of the petition.

CHAPTER 5. INSTRUCTORS AND EVALUATORS

SECTION 1. INSTRUCTOR/EVALUATOR PROGRAMS

5-1. GENERAL. Instructors, evaluators, and supervisors are the backbone of the Advanced Qualification Program (AQP). The applicant must devote the appropriate time and resources to the qualification and continuing qualification of these key personnel.

5-2. INSTRUCTOR/EVALUATOR CURRICULUMS. Each AQP (including provisional AQP curriculums for training centers) must provide instructor, evaluator, and supervisor indoctrination, qualification, and continuing qualification curriculums. These requirements include a separate job task analysis (JTA), qualification standards, curriculum(s), and curriculum outlines focusing on the instructor/evaluator duty positions. AQP regulatory guidance states, in part, that an AQP provides for approval of an alternate method for qualifying, training, certifying and otherwise ensuring competency of instructors and evaluators required to be trained or qualified under Title 14 of the Code of Federal Regulations (14 CFR) parts 121 and 135. AQP entails no changes to the existing policies and procedures as they apply to the eligibility, approval, and surveillance requirements for instructors, evaluators (check airmen) and aircrew program designees (APD).

NOTE: The qualification standards document for instructor/evaluators does not need to include conditions or a criticality/currency analysis.

a. Definitions. AQP regulatory guidance defines an evaluator as a person who has satisfactorily completed training and evaluation that qualifies that person to evaluate the performance of crewmembers, instructors, other evaluators, aircraft dispatchers and other operational personnel, as appropriate. In an effort to remain aligned with traditional check airman policy and procedure, the AQP term “evaluator” is considered synonymous with check airman. However, for flight attendant and dispatcher AQP, the word “evaluator” will replace the traditional use of the word “supervisor” as an individual that evaluates. Part 121 subpart Y does not redefine the qualifications or prerequisites to be an instructor, evaluator, check airman, or APD. Definitions of these positions are found in FAA Order 8400.10, Air Transportation Operations Inspector’s Handbook.

b. Qualification Training. AQP regulatory guidance contains limited guidance on the instructional content of each curriculum. Training requirements for each curriculum are derived from a thorough and accurate task analysis. Typical subject areas might include as appropriate:

(1) Instructor Indoctrination Curriculum.

(a) The learning process.

(b) Elements of effective teaching.

(c) Student evaluation, quizzing, and testing.

(d) Overview of AQP program development, implementation, and operation policy.

(e) Lesson preparation and application.

(f) Classroom instructing techniques.

(g) Techniques for instructing in the cockpit environment.

(h) Standardization and rater/referent reliability.

(i) Resource management (CRM/DRM) and human factors training.

(j) How to conduct training modules for students with varying backgrounds and varying levels of experience and ability.

(k) Instructor responsibilities.

(2) Instructor Qualification Curriculum.

(a) Effective use of, and qualification in, specific flight training devices, flight simulators, and aircraft.

(b) Limitations on use of training equipment.

(c) Evaluation of performance against objective standards.

(d) Effective preflight and postflight instruction.

(e) Effective analysis and correction of common errors.

(f) Teaching/facilitation of CRM/DRM skills.

(g) Performance and analysis of standard flight events and procedures.

(h) Safety considerations in the training environment.

(i) Data-gathering procedures.

(j) Standardization and rater/referent reliability.

(3) Differences Between Traditional and AQP for Existing Instructors.

(a) Overview of AQP program development, implementation, and operation policy.

(b) CRM/DRM and human factors training.

(c) Standardization and rater/reverent reliability.

(d) Data-gathering procedures.

(e) Effective use of, and qualification in, specific flight training devices, flight simulators, and aircraft used in the AQP.

(f) Limitations on use of training equipment used in the AQP.

(g) Evaluation of performance against objective standards.

(4) Evaluator Indoctrination Curriculum.

(a) Evaluation policies and techniques.

(b) The role of the evaluator.

(c) Administrative procedures.

(d) General safety considerations.

(e) Evaluating human factors and CRM/DRM skills.

(f) Standardization and rater reliability.

(5) Evaluator Qualification Curriculum.

(a) For each crewmember position requiring a particular evaluation the method of conducting:

1 Line check.

2 In-flight proficiency evaluations if required.

3 Proficiency evaluations in flight simulators and/or flight training devices.

4 Special purpose evaluations (e.g., long-range navigation).

(b) The standards for the evaluations in the previous paragraph.

(c) The methods and standards associated with airman certification evaluation.

(d) How to conduct evaluations while simultaneously serving as pilot-in-command (PIC), second-in-command (SIC), or safety pilot.

(e) Safety considerations for the various types of evaluations.

(f) Safety considerations particular to the make, model, and series aircraft (or variant).

(g) How to evaluate instructors/evaluators.

(h) Company/FAA policies with regard to the conduct of evaluations.

(i) Administrative requirements particular to evaluations.

(j) Evaluating CRM/DRM skills.

(k) Briefing and debriefing techniques.

(l) Data-gathering procedures.

(6) Differences between Traditional and AQP for Existing Evaluators.

(a) Overview of AQP program development, implementation, and operation policy.

(b) CRM/DRM and human factors training/evaluating.

(c) Standardization and rater reliability.

(d) Data-gathering procedures.

(e) Effective use of, and qualification in, specific flight training devices, flight simulators, and aircraft used in the AQP.

(f) Limitations on use of training equipment used in the AQP.

(g) Evaluation of performance against objective standards.

(h) Briefing and debriefing techniques.

(i) How to evaluate instructors/evaluators.

(j) Company/FAA policies with regard to the conduct of evaluations.

(k) Administrative requirements particular to evaluations.

c. Qualification -- Evaluation and Observation. Every instructor/evaluator must receive a validation/evaluation at the end of each curriculum. These methodologies must be described in the test and evaluation strategy within the instructor/evaluator qualification standards. The

required FAA observation of new instructors/evaluators (check airman) is delineated in FAA Order 8400.10.

d. Continuing Qualification. Instructors/evaluators should be given an opportunity to operate in all positions in which they are authorized to perform duties. Flight instructors/evaluators should demonstrate the ability to brief and debrief, fly and instruct in both pilot seats and operate the simulator, if appropriate. If possible, instructors/evaluators should focus on the training, validations and evaluations that are under development for the next evaluation period. This will allow the instructors/evaluators to become familiar with all aspects of the periods they will be expected to teach/evaluate the following year, help ensure the development of a polished continuing qualification program and give the instructors/evaluators an opportunity to maintain their own proficiency using scenarios they have not seen. Each training period should be conducted by one of a small core of the most experienced instructors/evaluators. Each instructor/evaluator continuing qualification curriculum segment should include the requirements listed below. Requirements (paragraphs (3) and (4) below) should be defined in the test and evaluation strategy in the instructor/evaluator qualification standards:

(1) Basic crew position and or specialized flight instructor/evaluator continuing qualification.

(2) Ground and flight training to enhance, upgrade, and maintain each instructor/evaluator's knowledge, skills, and abilities.

(3) A schedule for recency of instructor/evaluator's experience.

NOTE: The program must define the minimum requirements each category of instructor/evaluator will accomplish to stay current in their position. Instructors must maintain a high level of competency, so the minimum standard must be sufficient to maintain their proficiency. Evaluators will perform an established minimum number of each validation/evaluation that they are qualified to administer.

(4) A schedule for critical examination of each instructor/evaluator's abilities and adherence to prescribed standards.

e. Instructor and Evaluator CRM Training and Evaluation. All instructors and evaluators will receive instruction and evaluation in CRM/DRM objectives and training methods, as appropriate.

5-3. AUTHORIZED EVALUATION PERSONNEL BY AQP EVENT. The table in Figure 5-1 illustrates the level of authorization needed for an individual to either train, validate, or evaluate an AQP event.

FIGURE 5-1.
AUTHORIZED EVALUATION PERSONNEL BY AQP CURRICULUM

FLIGHT CREW QUALIFICATION CURRICULUM

Event	Instructor	Evaluator	Designee	FAA Inspector
Knowledge validation	Yes	Yes	Yes	Yes
Procedures validation	Yes	Yes	Yes	Yes
Maneuvers validation	No	Yes	Yes	Yes
LOE For Qualification	No	No	Yes	Yes
LOE For Certification	No	No	Yes	Yes
Operational Experience	No	Yes	Yes	If qualified*
Line Check	No	Yes	Yes	If qualified*

* Title 14 CFR part 135 operations only

FLIGHT CREW CONTINUING QUALIFICATION CURRICULUM

Event	Instructor	Evaluator	Designee	FAA Inspector
LOFT/Maneuvers Training	Yes	Yes	Yes	Yes
Maneuvers Validation	No	Yes	Yes	Yes
LOE	No	Yes	Yes	Yes
Line Check	No	Yes	Yes	If qualified*

* Title 14 CFR part 135 operations only

SECTION 2. CERTIFICATION PERSONNEL

5-4. TRAINING. Historically, aviation safety inspectors (ASI) and APDs certified airmen using a maneuver-based evaluation scenario derived from the practical test standards (PTS). AQP replaces the traditional maneuver-based certification check ride with a scenario-based line operational evaluation (LOE). Due to the unique characteristics and detailed scripting of LOEs, all personnel approved to conduct certification are required to complete AQP evaluator training. This training may consist of the indoctrination and qualification curriculums for new personnel, or a differences module for ASIs and APDs who are already qualified under the operator's traditional program.

5-5. AUTHORIZED CERTIFICATION PERSONNEL. Principal operations inspectors (POI) will only authorize ASIs, APMs, or TCPMs, air carrier designated examiners (ADE), APDs, airline transport pilot examiners (ATPE), or qualified training center evaluators who have

completed the prerequisite AQP evaluator training to conduct pilot examination activities. Only the following personnel may be authorized signatory authority on side two of FAA Form 8710-1: Airman Certificate and/or Rating Application Supplemental Information and Instructions:

a. APM or TCPM. Must be current and qualified on the make, model, and series of aircraft and have attended the particular operator's AQP evaluator qualification or differences training program, as appropriate. Any APM and TCPM who conducts an AQP evaluation must complete the same proficiency, currency, and continuing qualification training requirements as the operator's evaluators (check airmen), with the exception of line checks. An APM/TCPM's responsibilities under an AQP remain as specified in Order 8400.10, volume 5, chapter 6.

b. ASI. Must be current and qualified on the make, model, and series of aircraft, and have attended the particular operator's AQP evaluator qualification or differences training program, as appropriate.

c. APD and Training Center Evaluator. Must be current and qualified on the make, model, and series of aircraft and have completed the particular operator's AQP evaluator qualification or differences training, as appropriate, and maintain continuing evaluator qualification. The FAA will designate APDs and training center evaluators, and their special training will be noted on FAA Form 8710-6: Examiner Designation and Qualification Record, block 10. Each APD must comply with the requirements outlined in Order 8400.10, volume 5, chapter 6, section 3. Each training center evaluator must comply with the requirements specified by the Administrator for such personnel.

d. ATPE. Must be current and qualified on the make, model and series of aircraft and have completed the particular operator's AQP evaluator qualification or differences training, as appropriate, and maintain continuing evaluator qualification under the particular operator's AQP. ATPEs must be authorized by the FAA to conduct such evaluations.

SECTION 3. QUALITY ASSURANCE AND STANDARDIZATION

5-6. QUALITY ASSURANCE. To continuously improve the quality of AQP training, an AQP applicant should develop a quality assurance program to continually evaluate training programs, instructors, and evaluators. The most experienced personnel should staff the program. Their duties would include observing training, validation, and evaluation events in order to:

a. Critique performance.

b. Recommend change.

c. Provide feedback to the entire training organization at regular intervals.

5-7. STANDARDIZATION. A standardization program is necessary to establish uniform grading criteria, address reliability between instructors/evaluators, and develop remediation procedures. The AQP data collection and analysis is incumbent upon reliable and valid

instructor/evaluator grading judgments. The program must provide rater reliability training during the qualification, continuing qualification and differences curriculums. There are numerous techniques currently used to address rater reliability. The FAA is involved in research to define acceptable methodologies. Examples are available on the Flight Operational Quality Assurance (FOQA)/AQP Web site.

CHAPTER 6. TRAINING CENTERS

SECTION 1. INTRODUCTION

6-1. BACKGROUND. This chapter provides guidance to any certificated Title 14 of the Code of Federal Regulations (14 CFR) part 142 training center or 14 CFR part 119 certificate holder that intends to provide training, qualification, or evaluation for a part 121 or part 135 certificate holder's Advanced Qualification Program (AQP). For the purposes of this chapter, a training center is any entity that offers training to a certificate holder by contract or other arrangement. 14 CFR part 121 subpart Y, Advanced Qualification Program, allows certificated air carriers seeking to accomplish training under the AQP to employ the services of a training center for that purpose.

6-2. TRAINING CENTERS OFFERING AN AQP. A training center that applies to offer an AQP curriculum for a specific part 121 or 135 air carrier may be approved under AQP regulatory guidance to provide such training to that specific carrier. There are two types of training centers that may offer AQP.

a. Certificated Part 142 Training Centers. An entity other than a part 121 or part 135 certificate holder may offer an AQP program to air carrier certificate holders. In this case, they are offering an approved, generic AQP with operator specific training to be incorporated into the final product. Any entity serving in this capacity must have been certificated under part 142 after August 2, 1998. Any training program for pilots, instructors, or evaluators approved under AQP is automatically approved under part 142, regardless of whether that approval occurs before or after August 2, 1998.

b. Certificated Air Carrier. A part 121 or part 135 certificate holder may offer a previously approved AQP to other certificate holders. In this case, they are offering their approved AQP with operator-specific training to be incorporated into the final product.

SECTION 2. PROVISIONAL APPROVAL: APPLICATION AND DEVELOPMENT

6-3. PROVISIONAL AQP. The major difference between the development of an AQP by a training center and by an air carrier is that the training center can develop generic AQP documentation and individual curriculum segments through phase II. This documentation is given a provisional approval. A provisional AQP allows a training center to accomplish front-end AQP development through phase II and to offer its services as an approved AQP provider before establishing a contract or other arrangements with a specific certificate holder.

a. Additional Development. A provisional AQP cannot be employed for use with a specific certificate holder without additional development to tailor the program to the needs of a specific air carrier.

b. Multiple Provisional AQPs. Training centers should consider developing multiple provisional AQPs to shorten the time required to adapt the AQP to the needs of an air carrier. For example:

(1) Types -- different makes, models, series.

(2) Trainee demographics – low-time versus high-time pilots.

(3) Flight operations -- short haul regional airlines versus long haul major airlines or supplemental air carriers.

SECTION 3. REQUEST AND APPROVAL FOR USE OF TRAINING CENTERS

6-4. REQUEST. A certificate holder that wishes to use a training center for AQP training must submit a Letter Of Request directly to the FAA manager of Voluntary Safety Programs (VSP), with a copy to the principal operations inspector (POI) and Training Center Program Manager (TCPM). The letter of request should specify the training center, identify the AQP curriculum, and cite the time frame for which such AQP services would be conducted.

6-5. DEVELOPMENT. The AQP analysis and documentation required for a training center to obtain approval to conduct an AQP for a specific certificate holder is similar to that which would be required of an air carrier.

a. Documentation. All documentation must be consistent with the multi-phased development process outlined in this guidance, and must be specific to the certificate holder for whom such training will be conducted.

b. Extended Review Team (ERT). AQP documentation developed by a training center for a specific certificate holder will be submitted directly by the training center to the VSP manager for review and approval. The VSP manager will form an AQP ERT, to include the certificate holder's POI, the TCPM, and such other personnel as may be appropriate.

c. Notification of Approval. The VSP manager and the POI/TCPM will notify the certificate holder by a joint letter of approval for the training center to conduct AQP training.

(1) For an air carrier, approval for use of the AQP, to include reference to any FAA-specified conditions and limitations, is entered by the POI into the certificate holder's Operations Specifications (OpSpecs).

(2) Following receipt of notification of approval, the TCPM will notify the training center that it has FAA approval to conduct an AQP program for a specific certificate holder.

SECTION 4. TRAINING CENTER'S INSTRUCTORS AND EVALUATORS

6-6. QUALIFICATION. Training center instructors and evaluators are subject to the same training requirements as discussed in Chapter 5.

6-7. INSTRUCTOR/EVALUATOR CURRICULUM APPROVAL. Training centers seeking to offer an AQP curriculum to certificate holders must obtain approval of their AQP qualification and continuing qualification programs for instructors and/or evaluators.

a. Documentation. The documentation required for such approval is similar to that required for certificate holders, except that training centers may obtain provisional approval of AQP instructor and evaluator AQP documentation through AQP phase III.

b. Notification. Notification of provisional approval for instructor and/or evaluator AQPs is initiated by the VSP manager and follows the same process as identified in paragraph 6-5.

SECTION 5. DATA COLLECTION AND RECORDKEEPING

6-8. DATA COLLECTION. Part 121 or 135 certificate holders who obtain an approved AQP through a training center are responsible for verifying compliance with all of the requirements of their approved program, and for reviewing the results of the data collection and analysis on a continuing basis. AQP data collection, analysis, and reporting requirements for training center-administered AQPs are identical to those that apply to AQPs administered by individual certificate holders for their own employees.

6-9. DATA SUBMISSION. Either the training center or the certificate holder may transmit the required data to the FAA. The party that is delegated for this action must be clearly identified in the training center's approved AQP Implementation and Operations Plan (I&O Plan) for a specific air carrier. The certificate holder is responsible for complying with the requirements contained in this Advisory Circular (AC) that pertain to the submission of AQP data to the FAA.

6-10. RECORDKEEPING. AQP recordkeeping is identical to that required under traditional parts 121, 135, and 142 training programs. However, for AQP, records must clearly indicate that the training employed to qualify pilots, other flight crewmembers, instructors, or evaluators was accomplished under an AQP curriculum. When a certificate holder arranges for use of a training center to conduct an AQP, the responsibility remains with the certificate holder to assure that the training records required under part 121 or 135 are maintained.

CHAPTER 7. TRANSITION TO AQP

SECTION 1. OVERVIEW

7-1. GENERAL. Most Advanced Qualification Programs (AQP) have been built using one of two approaches. Some applicants have elected to continue training with their traditional program while they developed their AQP. Other applicants have requested an optional exemption to traditional training, commonly called a Single Visit Exemption (SVE).

7-2. ENTERING AQP FROM AN ESTABLISHED TRAINING PROGRAM. Applicants entering AQP may begin with a qualification curriculum or a continuing qualification (CQ) curriculum, or both.

a. Qualification Curriculum. Entering AQP with a qualification curriculum may also require the development of an indoctrination curriculum. Having both curriculums in place allows an applicant to train new hires and provide qualification training for its established crewmembers and other operational personnel (if applicable).

b. CQ Curriculum. If an applicant develops a CQ curriculum using a 12-month training interval, a transition plan must be developed to address the modification of pilots-in-command (PIC), seconds-in-command (SIC) and flight engineers (FE) base months. Participants should transition to a training cycle that puts PICs/SICs/FEs in the same training cycle (annually or more frequently) to maximize simulator resources and to provide effective crew pairing. The transition plan might include:

(1) PICs scheduled for a 6-month flight training session may receive a line check during the 3-month eligibility period in lieu of the training. The AQP CQ will occur during their base month (plus or minus 1 month), 6 months later.

(2) PICs scheduled for a recurrent proficiency check during their base month will receive the AQP CQ.

(3) SICs and FEs (if applicable) scheduled for proficiency checks will receive the AQP CQ.

7-3. TRANSITIONING TO AQP USING THE SVE. The FAA grants an exemption in the public interest and with the assurance that a level of safety equivalent to the regulations from which an exemption is sought will be maintained. The exemption that is issued will contain specific conditions and limitations. It is granted for a 2-year period and may be renewed subject to FAA determination of reasonable progress towards AQP implementation. The SVE allows all fleets to transition to a training cycle that puts PICs, SICs, and FEs in the same training cycle (annually or more frequently). The transition period may require 6 months to place all crewmembers into the Single Visit Training Program (SVTP) and 12 months to complete the training cycle. The SVE applies the following conditions to recurrent training:

a. A certificate holder must maintain an SVTP for crewmembers, instructors, and evaluators. The certificate holder must submit revisions to its SVTP through its principal operations inspector (POI) to the FAA manager Voluntary Safety Programs (VSP), AFS-230, for approval prior to the execution of privileges under the exemption. Notification of approval for the certificate holder to implement its SVTP will be approved by the POI.

b. A certificate holder must maintain a master AQP transition schedule for FAA approval, and submit quarterly written progress reports thereafter, in a format approved by the Administrator, to the VSP manager with a copy to the POI. The FAA will monitor the progress of the transition toward AQP in accordance with the certificate holder's approved schedule. Maintaining reasonable progress toward the certificate holder's AQP transition is an explicit condition of the exemption.

c. A certificate holder must conduct a pre-training "first-look" evaluation for all pilots that addresses at least a subset of tasks, maneuvers, or procedures included in appendix F to Title 14 of the Code of Federal Regulations (14 CFR) part 121. The certificate holder must collect first-look data before the repeated execution of any such first-look item in a flight simulator or flight training device (FTD). First-look maneuvers must not be briefed in advance of the first execution of such maneuvers. The certificate holder may elect to obtain first-look evaluation data by measuring the proficiency of first-look items the first time they occur during normally scheduled recurrent training in a flight simulator or FTD, or by scheduling a special first-look evaluation session for first-look items, or a combination thereof. The list of first-look items must be submitted through the certificate holder's POI to the VSP manager for approval before its use. The first-look items will be selected for each type of aircraft and will focus on at least one of the following categories:

(1) The execution of maneuvers, tasks, and/or procedures under degraded modes of operation.

(2) The execution of such items under emergency conditions; or

(3) Those maneuvers, tasks, and/or procedures likely to be sensitive to loss of proficiency because of infrequent practice. Unless otherwise authorized by the VSP manager with the concurrence of the POI, first-look items must be maintained therein until this exemption expires. The certificate holder must apply the same measurement methodology and rating criteria to the evaluation of first-look proficiency as that condition specified in paragraph 7-3f below for proficiency evaluations.

d. A certificate holder must ensure all flight crewmembers are trained and evaluated to proficiency at their duty position, except that type-rated first officers may occupy either pilot position for training purposes. This training and evaluation must be conducted during an SVTP that includes at least the following:

- Annual recurrent ground school instruction that includes all 14 CFR part 121-mandated-training requirements and that integrates, where applicable, Crew

Resource Management (CRM) and human factors into recurrent ground school subject lessons.

e. Annual training to proficiency for each flight crewmember in a flight simulator or FTD. As a minimum, proficiency training must be provided for all tasks, maneuvers, or procedures on which performance is found to be unsatisfactory during the first-look evaluation and must continue until satisfactory performance is observed.

f. Annual recurrent training conducted every 12 months, plus or minus 1 month, in a flight simulator or an FTD approved for its intended use by the POI. This training must be composed of at least two SVTP sessions on 2 separate days, conducted to the maximum extent feasible using a full-crew complement that consists of a captain, first officer, and, where applicable, a second officer. When a full crew is available for training, an SVTP session duration of at least 4 hours per day, including reasonable time for breaks, must be employed, to include line oriented flight training (LOFT), the scenario duration of which must be at least 60 uninterrupted minutes. Multiple flight segments representative of the certificate holder's flight operations may be included in the LOFT. When a full-crew complement is not available, the content and duration of the training must be determined in accordance with a crew-pairing decision rule approved by the POI in accordance with the condition spelled out in paragraph 7-3k below, but in no case must the duration of such training be less than 2 hours per day, including a reasonable time for breaks, to include LOFT or Special Purpose Operational Training (SPOT), the scenario duration of which must be at least 60 uninterrupted minutes. Advisory Circular (AC) 120-35, Line Operational Simulations (LOS): Line-Oriented Flight Training, Special Purpose Operational Training, Line Operational Evaluation, as amended, must be used for general guidance with respect to the design and execution of LOFT and SPOT. All LOFT and SPOT scenarios must be approved by the POI for their intended use. SVTP sessions may consist of LOFT, SPOT, line operational evaluation (LOE), support training, and proficiency checks, as well as individual maneuvers or events, as required for training or checking, subject to the conditions specified herein.

g. A certificate holder must ensure all proficiency evaluations consist of maneuvers, tasks, and procedures approved by the Administrator. The certificate holder may elect to propose fixed and variable items to be required on proficiency evaluations, as follows:

(1) Approved fixed items must be included on all proficiency evaluations on a given duty position in a given aircraft for the duration of this exemption, and

(2) Approved variable items may be changed at the discretion of the certificate holder and must be selected based on operational need. Before the execution of this option, the content of fixed and variable items, together with any associated evaluator proficiency assessment rating forms, must be submitted through the POI to the VSP manager, AFS-230, for approval. Any fixed and variable maneuver list proposed by the certificate holder must incorporate specifications of the applicable duty position (e.g., PIC, SIC, or both, and FE) and pilot role (pilot flying, pilot not flying, or both) to be addressed in the proficiency evaluation for each such maneuver.

h. Proficiency evaluations must be accomplished to the maximum extent feasible in a crew-oriented setting with a PIC and SIC. For all tasks, maneuvers, or procedures to be included on proficiency evaluations, a certificate holder must identify the performance standards to be employed. Where appropriate, current FAA practical flight test advisory materials (FAA-S-8081-5, Airline Transport Pilot and Aircraft Type Rating Practical Test Standards for Airplane, as revised) and pertinent flight standardization board reports for a given type of aircraft should be used for guidance in developing specifications for performance standards. The specification of performance standards must be submitted through the POI to the VSP manager for approval before implementation of the certificate holder's proposed SVTP.

i. A line check that consists of at least one flight segment and that incorporates both a technical and CRM debriefing facilitated by a line check airman must be conducted for all PICs not more than 6 months, plus or minus 1 month, following the PIC proficiency check.

j. For first-look evaluations, proficiency evaluations, and line checks, a certificate holder must develop and implement the following:

(1) A proficiency rating scale methodology (e.g., Unsatisfactory = 1; Repeated (Once Only) = 2; Debriefed (No Repeats) = 3; Satisfactory = 4; and Outstanding = 5), and

(2) A reason categorization system for use by evaluators to categorize the principal reason for below satisfactory performance (e.g., system knowledge, procedural knowledge, execution, communication/coordination, situation awareness, flight management/flight guidance system operation, and teamwork). A certificate holder must submit its proposed rating scale methodology and reason categorization system through its POI to the FAA AQP manager for approval before the implementation of its SVTP.

k. Notwithstanding any other condition of this exemption, a certificate holder must ensure that each person serving as a required flight crewmember on more than one airplane type complies with the provisions of part 121, sections 121.433(c)(1)(i) and 121.440(a).

l. Any certificate holder PIC who fails a proficiency check must:

(1) Receive additional training to proficiency,

(2) Demonstrate within-standards performance on a subsequent proficiency check before returning to flight duty,

(3) Satisfactorily complete an additional line check not more than 3 months following an unsatisfactory proficiency check, and

(4) Satisfactorily complete an additional proficiency check not more than 6 months following an unsatisfactory proficiency check.

NOTE: The provisions of this condition must not establish a new anniversary date for training or checking.

m. A certificate holder must ensure every flight crewmember who fails to complete any training or evaluation satisfactorily under this exemption does not serve as a required flight crewmember until such deficiencies have been corrected and the crewmember has been retrained or satisfactorily reevaluated as appropriate on those items.

n. Training to be accomplished under the exemption must specifically include CRM conducted in a flight simulator. Certificate holders must refer to AC 120-51, Crew Resource Management Training, as revised, for general guidance in the development of CRM training plans and programs.

o. Before implementation, a certificate holder must submit a documented methodology for developing and administering LOS scenarios (LOFT, SPOT, or LOE) through its POI to the FAA AQP manager for approval. That methodology must ensure that identical LOFT/LOE scenarios are not employed in two successive training sessions for a given crew, and pilots are not exposed to identical LOFT/LOE scenarios in 2 successive years.

p. A certificate holder must ensure that first-look, LOS, and proficiency evaluations are accomplished in a flight simulator meeting the requirements of appendix H to part 121 and are approved for its intended use by its POI. Notwithstanding the provisions of this exemption, if a proficiency evaluation required by this exemption is not accomplished in a level B (phase I) or higher flight simulator, then two landings must be accomplished in the appropriate aircraft in accordance with the provisions of part 121, section 121.441(e). This requirement must be accomplished within the eligibility period for the proficiency evaluation involved.

q. Data on pilot performance conducted under the provisions of this exemption must be collected by the certificate holder and reported to the FAA, as specified in paragraph 7-3v below, beginning on implementation of its SVTP, unless otherwise authorized by the Manager, Air Transportation Division, AFS-200. Performance evaluation and data reporting must be accomplished in accordance with the following categories and the provisions of the condition in paragraph 7-3f above:

(1) By aircraft make, to include separate categorization by series and variant if, according to the criteria specified in AC 120-53, Crew Qualification and Pilot Type Rating Requirements for Transport Category Aircraft Operated Under FAR Part 121, as revised, significant operational differences exist.

(2) By crew position (PIC, SIC, and/or FE) and SVTP flight simulator sessions. Each crewmember's data must be reported as a single identifiable electronic record, with appropriate identifiers to distinguish crew position to permit tracking individual performance, where possible, from first-look evaluation through proficiency training and evaluation. The certificate holder must report additional training sessions beyond normally programmed training for any crewmember. The certificate holder must report the occurrence of seat position substitution by an instructor or other qualified pilot, or crewmembers in training who are occupying other than their normal seat position.

(3) By individual task, maneuver, or procedure, as applicable.

r. First-Look. Rating scale and reason code data must be obtained on the first occurrence of appendix F to part 121 subset maneuvers in accordance with the provisions of conditions in paragraphs 7-3c and 7-3f above.

s. Proficiency Training. Data must be obtained on the number of maneuver repetitions required during training to proficiency on first-look items on which initial performance is below standard.

t. Proficiency Evaluation. Rating scale data must be obtained for each repetition of a proficiency evaluation maneuver, task, or procedure to include reason codes for each occurrence of performance below standard, in accordance with the provisions of the condition in paragraph 7-3f above. Proficiency must be measured against the specifications for performance standards developed in accordance with the provisions of paragraph 7-3j above. Certificate holder must report unsatisfactory proficiency evaluations.

u. Line Check. Line checks must employ the same evaluation methodology as specified under this exemption for proficiency checks, with the exception that such data will be limited to the PIC tasks, maneuvers, and procedures that occur during the flight segments observed, in accordance with the provisions of the condition in paragraph 7-3e above. The certificate holder must report unsatisfactory line checks.

v. The certificate holder must provide the FAA with de-identified raw data (i.e., individual pilot performance assessment data on which name identification has been removed) on a monthly basis, in accordance with the categorization requirements specified in the condition in paragraph 7-3m above. For this purpose, the certificate holder must convey these data via IBM-compatible diskettes or electronic media. The data format, together with a written description of the electronic record structure (to include database file relationships and data record field definitions), should be forwarded directly to the FAA AQP for approval. The certificate holder must obtain approval for any subsequent changes thereto, not less than 30 days before the implementation of any such changes.

w. In addition to any other reporting requirements specified herein, the certificate holder must submit an annual SVTP report documenting training and checking effectiveness to the certificate holder's POI using a method and format acceptable to the Administrator. These reports must:

- Document the certificate holder's own analysis of data acquired under this exemption
- Identify any trends, common problem areas, or potential deficiencies
- Include a description of any corrective steps taken or warranted

During the second year of the exemption, the reports must incorporate comparisons of data between equivalent periods in the preceding year.

x. SVTP review meetings must be scheduled to occur on an annual basis, unless sooner requested by the FAA or by the certificate holder, to be attended by representatives of the certificate holder, the certificate holder's POI, and AFS-230 at a location and on a date to be determined by the POI. The purpose will be to review:

(1) Compliance with the terms and conditions of this exemption.

(2) Data collection issues.

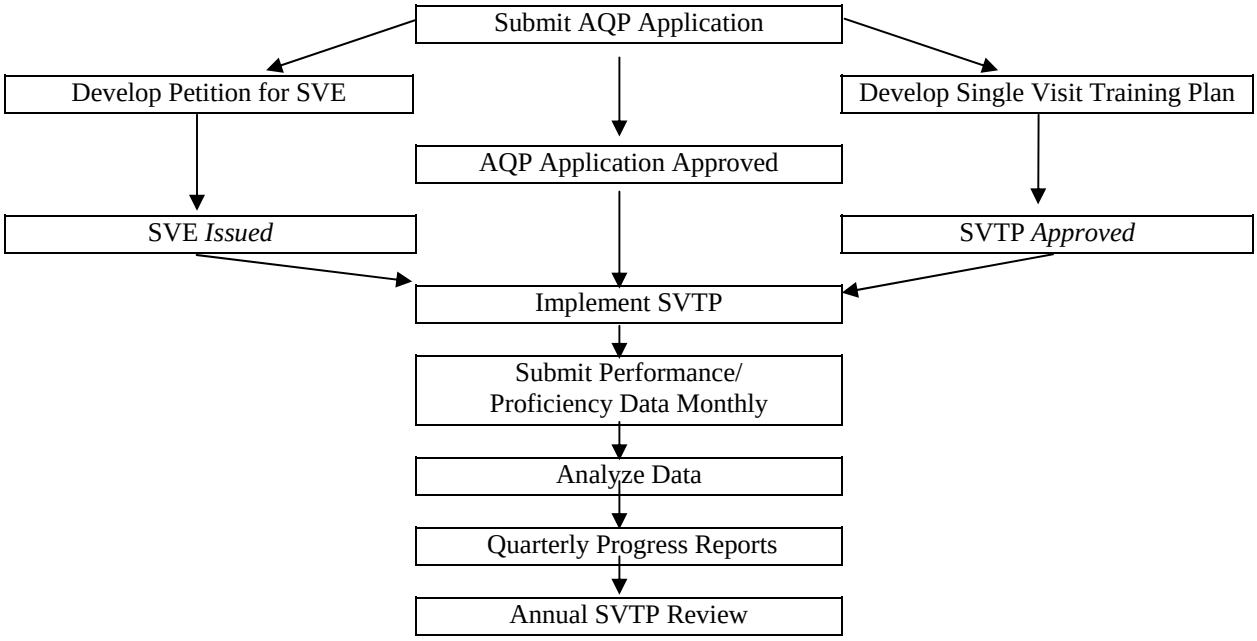
(3) Data results including, in particular, the identification of trends, as well as any associated action taken or warranted.

(4) The status of the certificate holder's progress toward transitioning its aircraft fleets out of this SVE into AQP.

SECTION 2. THE PETITION FOR EXEMPTION

7-4. GENERAL. The petition for exemption to allow transition to AQP is made in accordance with 14 CFR part 11, section 11.25. Figure 7-1 illustrates sequence of events for obtaining and applying the SVE.

FIGURE 7-1.
SINGLE VISIT EXEMPTION PROCESS (SVE)



7-5. THE PETITION PROCESS. Any interested person may petition the Administrator to issue, amend, or repeal a rule. Each petitioner must submit, unless good cause is shown, the petition at least 120 days before the proposed effective date of the exemption. Each petition

must be submitted in duplicate to the FAA at the Rules Docket (AGC-10), Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591. Electronic versions may be submitted via the Docket Management System Web site: http://dms.dot.gov/.

> **NOTE: A generic model of a Single Visit petition is available on the AQP Web site or by requesting a copy from the VSP manager. It is recommended that AQP applicants forward a draft copy of their exemption to the VSP manager office for review before submission to the Rules Docket, AGC-10.**

7-6. THE PETITION. The petition should include a citation of each rule from which relief is requested, and a brief description of the general nature of the relief requested. In addition to identifying the regulation, the petition must explain in detail the interest of the petitioner in seeking the exemption. It must show why granting the exemption would be in the public interest and how safety will not be compromised. Finally, this information must be summarized in a format that may be published in the Federal Register. For the SVE, the applicable regulations are:

- Section 121.433(c)(1)(iii)
- Section 121.441(a)(1)
- Section 121.441(b)(1), appendix F
- Section 121.440(a) (when petitioning for "random" line check authority)

a. Interest of the Petitioner. The petition must explain the interests of the petitioner in the action requested, the nature and extent of the relief, and a description of each aircraft or person to be covered by the exemption.

b. Public Interest. The petition must present information, views, or arguments to support the action sought and the reasons why the granting of the request would be in the public interest.

c. Safety Considerations. The petitioner should state the reason(s) why the exemption would not adversely affect safety.

d. Safety Equivalency. Explain why the action taken would provide a level of safety equal to that provided by the rule from which the exemption is sought.

7-7. GRANTING OF THE PETITION. Upon being granted the petition through issuance of the exemption and with FAA approval of the SVTP plan, the applicant may transition specific fleets or all fleets of aircraft to the SVTP. The applicant will stipulate which fleets in the SVTP plan. See Figure 7-1 for an overview of this process. The process time expected for standard (generic) petitions is 90 days. Deviations from the standard single visit training petitions are not recommended.

> **NOTE: Deviations from the standard SVE petition may entail a lengthy process time. Therefore, the petitioner may want to consider submitting a separate petition for such deviations.**

7-8. RENEWAL REQUIREMENTS FOR THE SVE.

a. The exemption is issued for an initial 24-month period. The FAA expects that the applicant will be ready to enter phase IV of the AQP between 24 and 30 months. If the applicant knows that any fleet will not be ready to enter phase IV before the exemption expires, they may submit a petition for renewal. The renewal petition should be submitted no later than 180 days prior to exemption expiration. The following statements should be included in petitioner's renewal request:

- The petitioner should state the exemption number and request an extension for 2 years from the original expiration date.
- If applicable, the petitioner should state that all of the conditions that existed in the original petition are still in effect, and will remain so for the entire period of the extension.
- The petitioner should state that the request is in the public interest because the petitioner's approved SVTP will continue to maintain an equivalent or better level of safety to the training programs it replaced.

b. The FAA decision towards renewal will be based on a review and analysis of the applicant's reasonable progression towards completing AQP. Once the applicant has entered phase IV on all its fleets, the exemption will be allowed to expire unless it includes the random line check. In that case it will be necessary to renew every 2 years or petition for the Random Line Check Exemption separately.

SECTION 3. SVTP

7-9. OVERVIEW. The SVE requires that the applicant develop an SVTP that complies with each of the conditions and limitations of the exemption. The SVTP serves as a blueprint of the steps and procedures that an AQP applicant will implement to transition from a traditional training program to a program as authorized in the exemption. The applicant must submit the initial SVTP and any subsequent revisions through its POI to the VSP manager for approval prior to the execution of training under its SVTP or its revisions.

7-10. CONTENTS. The conditions and limitations set forth in the grant of exemption will specify the requirements and provide the details necessary to conduct an SVTP. An example of a generic grant of exemption and SVTP is available on the AQP Web site or by requesting a copy from the VSP manager.

7-11. SVTP PROFICIENCY CHECK. In accordance with the SVE grant, a proficiency check must be conducted at least every 12 months, plus or minus 1 month, for each crewmember in a flight simulator or in an aircraft, approved for its intended use by the POI. The applicant must ensure that all proficiency checks consist of maneuvers, tasks, and procedures approved by the Administrator. In lieu of a traditional proficiency check, as allowed by the grant, the applicant may propose a check ride consisting of fixed and variable maneuvers.

a. Maneuvers: Fixed and Variable.

(1) Fixed Maneuvers. These are a subset of appendix F flight maneuvers that are identified by the applicant as being critical to evaluating the proficiency of each pilot. Any fixed maneuver items proposed by the applicant will specify applicable duty position (PIC, SIC, or both, and where applicable, FE), and pilot-flying role (pilot-flying (PF) or pilot-not-flying (PM)) to be addressed in proficiency checks for each maneuver. A typical proficiency check should include four to six fixed maneuvers for the PIC and three to four fixed maneuvers for the SIC. Figure 7-2 contains a sample of fixed maneuvers.

(2) Variable Maneuvers. These are appendix F flight maneuvers or other maneuvers that are identified by the applicant as being fundamental to their operations. A typical proficiency check would include two or more variable maneuvers for each pilot. There are two approaches for determining how variable maneuvers will be used. The first approach is to identify the variable maneuvers that each pilot will be evaluated on during a period (1 year) and gather data on these maneuvers. A second approach is to have a list of variable maneuvers that can be sampled evenly throughout the period. The advantage of the second method, particularly for an applicant with a large number of pilots, is that more maneuvers can be sampled and a more accurate picture of the overall proficiency of the flightcrews can be obtained. Another advantage to sampling variable maneuvers is that it allows company check airman the flexibility to adjust proficiency checks based on company needs. The use of sampled variable maneuvers requires tight control in the scheduling of these events to ensure that each maneuver is sampled evenly and that each pilot is administered the same number of maneuvers. Figure 7-2 contains a sample of variable maneuvers for an operator that uses a sampling methodology.

b. Proficiency Check Administration. Proficiency checks must be accomplished to the maximum extent feasible in a crew-oriented setting with a PIC, SIC, and where applicable, an FE. The applicant must identify the performance standards to be employed on all tasks, maneuvers, and procedures. Where appropriate, current FAA practical flight test advisory materials (FAA-S-8081-5, Airline Transport Pilot and Type Rating Test Standards, as revised), and pertinent flight standardization board reports for a given type aircraft must be used for guidance in developing specifications for performance standards. The specification of performance standards must be submitted, through the POI, to the VSP manager for approval prior to implementation of the applicant's proposed SVTP.

7-12. APPROVAL OF THE SVTP. Upon acceptance by the FAA, the VSP manager and the POI will issue a joint letter of approval to the applicant. The POI will amend the operation specifications (OpSpecs) to include the SVE and notify the applicant to implement the SVTP.

NOTE: It is the responsibility of the POI to approve all LOFT scenarios.

7-13. REVISIONS. Changes to the program (adding different aircraft) and any revisions to the documents must coincide with the conditions set forth in the exemption and must have an acceptable revision control methodology. Revisions submitted should include:

a. A brief synopsis of each change and what pages/items are affected.

b. Change bars, or acceptable substitute, identifying the text/chart that has been changed.

c. The date of the revision and revision number on each page or graphic.

d. The List of Effective Pages.

7-14. IMPLEMENTATION OF THE SVTP. On the implementation date, the flight crewmember transition should proceed as follows:

a. PICs scheduled for a 6-month flight training session may receive a line check during the 3-month eligibility period in lieu of the training. The single visit training sessions will occur during their base month (plus or minus 1 month), 6 months later.

b. PICs scheduled for a recurrent proficiency check during their base month will receive the single visit training sessions.

c. SICs and FEs (if applicable) scheduled for proficiency checks will receive the single visit training sessions.

> **NOTE: The pairing of flight crewmembers into training cycles is one of the required features of the SVTP and may necessitate changing the base month for some individuals.**

7-15. DATA SUBMISSION AND REPORTING REQUIREMENTS. The monthly submission of performance/proficiency data, a quarterly progress report towards AQP, and annual SVTP report are conditions of the SVE. The annual SVTP report will:

a. Document training and checking effectiveness through analysis of data acquired.

b. Incorporate comparisons of data between equivalent periods in the preceding year.

c. Identify any trends, common problem areas; or potential deficiencies.

d. Include a description of any corrective steps taken or warranted.

7-16. SVTP REVIEW MEETING. This annual meeting is called by the POI, who specifies the time and location. Attendees include: AFS-230, the applicant, and other FAA personnel responsible for SVTP oversight. Agenda items include:

- Compliance with terms and conditions of the exemption
- Data collection and analysis
- Data results, including the identification of trends, as well as any associated action taken or warranted

- Discussion of quarterly progress reports and adherence to the Master AQP Transition Schedule (MATS)
- LOFT and event set design problems and suitability
- Methods that are used to avoid repetition of LOFT/LOS scenarios
- Discussion of SVTP proposed and past changes
- AQP challenges and difficulties
- Suggested improvements
- Performance standards and instructor/evaluation calibration

FIGURE 7-2.
SAMPLE OF PROFICIENCY CHECK FIXED AND VARIABLE MANEUVERS

Fixed:	PIC PF; SIC PM; FE SUPPORT
1	ILS To Cat I Minimums
2	Takeoff With Engine Failure After V_1 Before V_2
3	Engine-Out ILS Approach and Missed Approach
4	Engine-Out Landing
5	Non-Precision Approach
6	Rejected Takeoff
7	Low Visibility Taxi and Takeoff
8	CATII/III Approach

Fixed:	PIC PM; SIC PF; FE SUPPORT
1	ILS To CAT I Minimums and Missed Approach
2	Takeoff With Engine Failure After V_1 Before V_2
3	Engine-Out ILS Approach and Landing
4	Non-Precision Approach (VOR, NDB, LOC, LOC/BC,LDA, SDF, ASR, RNav/FMS, GPS)

Variable:	PIC, SIC, FE SUPPORT
1	APU Fire
2	Asymmetrical Inboard Trailing Edge Flaps
3	Asymmetrical Outboard Trailing Edge Flaps
4	Emergency Evacuation
5	Engine Fire/Severe Damage
6	Essential Power Failure Light ON
7	Fuel Dumping-Main Tanks
8	Generator Field and Generator Breaker Tripped
9	GPWS In-flight Escape Maneuver
10	Holding
11	Landing and Landing Rollout in Crosswind
12	Loss of all Generators
13	Manual Landing Gear Extension
14	Pack Trip Off Light ON
15	Perform Bleed Air Trip Off Light ON procedure
16	Rapid Decompression
17	Rejected start/Overtemp
18	Rejected start procedure-No ignition
19	System A Restoration/Loss
20	System B Overheat Light ON
21	System B Restoration/Loss
22	Two Engine Inoperative Approach
23	Wheel Well Fire
24	Windshear avoidance and precautionary procedures-On Approach
25	Windshear avoidance and precautionary procedures-On Takeoff (after V1)

Fixed and Variable:	Flight Engineer (Where Applicable)
1	Duties During Engine-Out Takeoffs and Landings
2	Duties During CATII/III Approach
3	Duties During Rejected Takeoff
4	Normal, Abnormal and Emergency Procedures
5	Aircraft Systems Knowledge and Procedures

CHAPTER 8. AQP DATA MANAGEMENT

SECTION 1. INTRODUCTION

8-1. OVERVIEW. This chapter provides general guidance for the management of performance/proficiency data within an Advanced Qualification Program (AQP) and a Single Visit Training Program (SVTP). It also defines the minimal requirements for the collection and submission to the FAA of de-identified curriculum data. Guidance for data management is found in the AQP Data Management Guide that is produced by the Air Transport Association's (ATA) Data Management Focus Group.

a. Regulatory Requirement. Data collection and analysis processes acceptable to the Administrator that will ensure that the certificate holder obtains performance information on its crewmembers, instructors, and evaluators that will enable the certificate holder and the FAA to determine whether the form and content of training and evaluation activities are satisfactorily accomplishing the overall objectives of the curriculum.

> **NOTE: AFS-230 uses de-identified data for program monitoring, not for individual crewmember, dispatcher, or other operations personnel monitoring.**

b. Validation. The principal goal of the AQP is true proficiency-based training and qualification. This proficiency-based (expressed as performance objectives) is systematically developed and maintained, then continuously validated through the collection and analysis of performance/proficiency data. Data collection and analysis is a fundamental part of AQP and is also required for air carriers operating under an approved SVTP.

8-2. DEFINITIONS. In AQP, data is classified into the two broad categories of individual qualification records and performance/proficiency data.

a. Individual Qualification Records (Crew Records). These are identifiable records maintained in sufficient detail on each crewmember, instructor, and evaluator who is qualifying or has qualified under an AQP. These records show how and when the individual satisfied the requirements of each curriculum and therefore each assigned duty position. Air carriers may maintain a manual recordkeeping system, or a computerized recordkeeping system, based on the standard Title 14 of the Code of Federal Regulations (14 CFR) part 121 or 135 recordkeeping requirements. The recordkeeping process in AQP does not differ from traditional recordkeeping requirements.

b. Performance/Proficiency Data. This is de-identified information that represents the results of an individual's ability to successfully demonstrate the performance objectives of each curriculum. This information is captured during validation and evaluation gates as a crewmember progresses through an AQP curriculum. This data is collected from each crewmember's performance and is stored in aggregate in a Performance/Proficiency Database (PPDB). This data is used to analyze training programs and/or groups of participants, not for

tracking individual accomplishment. Successful collection and analysis of this data will identify and correct problems, validate AQP curriculums, and identify developing trends.

SECTION 2. DATA MANAGEMENT

8-3. OVERVIEW. In AQP, data management is a continual process of data collection, entry, validation, and submission.

8-4. DATA COLLECTION -- SVTP AND AQP.

a. SVTP. Collecting SVTP data essentially is a data collection process superimposed over the traditional recurrent training and line check program. SVTP data is collected for flight maneuvers performed during first-look sessions, proficiency, and line checks. This data consists of grades using a rating scale with associated reason codes as required in the certificate holder's Single Visit Exemption (SVE) and contained in the individual carrier's approved SVTP. Figure 8-1 illustrates the single visit data collection fields required for submission to the FAA.

b. AQP. AQP data collection is required for all AQP curricula as defined by each carrier's approved AQP data collection and analysis section of the certificate holder's Implementation & Operations Plan (I&O Plan). AQP data is collected at each validation or evaluation gate. This data consists of graded proficiency objectives using a rating scale with associated reason codes (if applicable). Data collection requirements for the AQP will vary with the curriculum, the type of curriculum activity (training, validation, or evaluation), the type of participant (crewmember, instructor, or evaluator), and the overall management objectives for use of the data. Figure 8-1 illustrates the AQP data collection fields required for submission to the FAA. All performance data collected on each proficiency objective must be relative to the applicable AQP qualification standards defined for the training and evaluation activities.

> **NOTE: For each crewmember in a qualification or continuing qualification curriculum, the FAA Manager of Voluntary Safety Programs (VSP) must be able to associate the data records applicable for that crewmember in that curriculum through logical grouping of the records, or linkage by a common de-identified index number (but not by name).**

8-5. DATA ENTRY. All performance data collected throughout the SVTP and AQP is entered into the carrier's PPDB. Typically, this is an electronic database for ease in analysis, comparison, and reporting purposes. Considerations for data entry include the method, the hardware/software required for data input, and the hardware/software required for data storage and manipulation. Database design is at the discretion of the carrier, providing that the design can generate the required report tables specified.

> **NOTE: AFS-230 requests copies of all grade sheets used in the evaluations or used through each gate.**

8-6. DATA SUBMISSION. The FAA has established the minimal requirements for the submission of de-identified data by curriculum. Figures 8-1 through 8-4 summarize the submission requirements in three tables. The three tables are the Proficiency Data Report Table (PDRT), the Skill Reason Table (SklRsn) and the Training Objectives Report Table (TORT). The information in these tables is downloaded from the carrier's PPDB. The submissions are forwarded to the VSP manager electronically in 1 calendar-month blocks for both the SVTP and AQP using a Microsoft Access (.mdb) format within 2 months of collection. The FAA will analyze the de-identified data using standard automated queries and reports to identify AQP performance trends. Figures 8-2, 8-3, and 8-4 contain specifications for each field in the three tables.

a. PDRT. The PDRT contains a listing of 23 fields that are reported for every measured item, providing a separate record for each. A measured item is a maneuver, task, procedure, or event set, and is the main component for data analysis. These fields provide a record of the results of the performance of each measured item along with supporting data for reporting and analysis. Certain supporting data fields (airline designator, curriculum, etc.) repeat for each record and can be automatically generated from a query/software routine. Each field in the PDRT must contain an entry, alpha/numeric, numeric, or text. Figure 8-2 contains the specifications for each field, defines the meaning of each field item, and provides examples of the field values.

b. SklRsn. An unsatisfactory rating (Mrate) of a measured item requires that a reason be entered to explain the rating. All reasons are entered in the SklRsn in field No. 24, Skill Reason Text. This table allows the carriers to report more than one Skill Reason Text for an unsatisfactory rating of a measured item without having to enter multiple records. There are only two fields in this table.

(1) The first field is Field No. 5 (SklRsn), which is the same as in the PDRT and provides the linkage between the two tables. For each record in the PDRT where one or more Skill Reasons need to be reported, an identifier is entered in the SklRsn field that is unique to the measured item. This identifier can be a concatenation of the fields that make it unique. For instance: Fleet+EvalType+CmID+Mitem. As long as the identifier is unique to the record, it is the carrier's discretion to determine which fields are used.

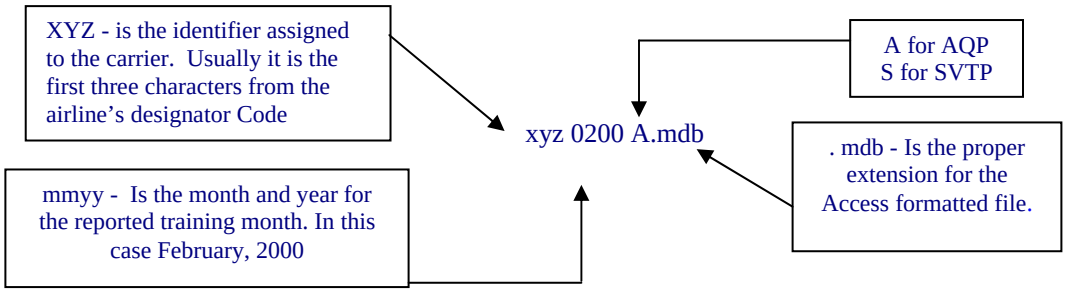
NOTE: If this approach is used, care must be taken to ensure that none of the component field contains an NA value.

(2) The second field in the SklRsn Table is the Skill Reason Text, the field that will contain descriptive text for each reason relevant to a particular measured item. For example: Systems Knowledge, Procedural, CRM, Technical Knowledge, etc.

c. TORT. This table is comprised of training objective(s) associated with each measured item. It provides a means of auditing the relationship between the measured item and the task analysis, qualification standards, and the curriculum. There are four fields in this table. The TORT links to the PDRT through the first field, Measured Item ID (MItemID). The second field, Objective ID (ObjID) is an identifier assigned to each terminal proficiency objective (TPO)

or supporting proficiency objective. The Objective ID may be the same as the Measured ID if it is a single TPO or SPO. However, in the case of a measured item that is an event set, there may be several training objective identifiers associated to the Measured Item ID. The third field, Objective Title (ObjTitle) is a text description of the training objective. The last field in this table is the Objective Type (ObjType) that identifies the training objective as a TPO or SPO.

d. The File Naming Convention. Data submissions must use the file-naming format (xyzmmyya.mdb) as shown in the example below:



SECTION 3. DATA ANALYSIS AND REPORTS

8-7. OVERVIEW. The primary users of data reports are internal carrier personnel and the FAA. Chapter 3, section 7 discusses the specific reporting requirements to the FAA.

a. Air Carrier. AQP requires that the data collection conducted by the air carrier for its own use in monitoring curricula will support more analytical detail and diagnostic functions than the data collected for submission to the FAA. The FAA expects the certificate holder to do an in-depth analysis of the effectiveness of the training. Reporting of data is based on the analysis of the PPDB to provide information on the curriculum and participant groups (crewmembers, instructor/evaluators). Once the data is collected and entered into the PPDB, an analysis should be performed on the aggregate information. Statistical analysis of the proficiency data enables carriers to make an internal assessment of their performance. Carriers should tailor these processes and techniques to suit their own requirements. Each carrier's data collection and performance assessment processes should be refined over time, based on their own practical experience. That is, the measures and processes should be optimized on an iterative basis to provide the degree of discrimination in crewmember performance needed to establish effective quality control over AQP curricula. See the ATA's Data Management guide for a more extensive discussion on reports and their use.

b. FAA. The data submissions to the FAA are primarily ratings and reason codes associated with performance measures taken at validation and evaluation gates and supporting data. The data, presented to the FAA in the three tables previously discussed is analyzed using the Data Analysis Reporting Tool (DART). This tool allows principal operations inspectors (POI) and AFS-230 personnel to conduct trend analysis to monitor overall program effectiveness.

FIGURE 8-1. DATA SUBMISSION REQUIREMENTS

Training Program				Single Visit			Advanced Qualification Program								
Curriculum				Recurrent			Qualification					Continuing Qualification			
Table	#	Field	Short Name	FL	PC	LC	SV	PV	MV	LOE	LC	FL	MV	LOE	LC
Proficiency Data Report Table	1	Measured Item	MItem	Req.	Req	Req	Des	Des	Req	Req	Req	Req	Req	Req	Req
	2	Measured Item ID	MitemID	N/A	N/A	N/A	Des	Des	Req	Req	Req	Req	Req	Req	Req
	3	Measured Item Rating	Mrate	Req.	Req	Req	Des	Des	Req	Req	Req	Req	Req	Req	Req
	4	Rating Meaning	Rmean	Des	Des	Des	Des	Des	Req	Req	Req	Req	Req	Req	Req
	5	Skill/Reason	SklRsn	Req.	Req	Req	N/A	N/A	Req	Req	Req	Req	Req	Req	Req
	6	PF/PNF	PFPNF	Req**	Req	Req	N/A	N/A	DES	Req	Req	Req**	DES	Req	Req
	7	Is Currency Item?	Currcy	N/A	N/A	N/A	N/A	N/A	Req	N/A	N/A	Req	Req	N/A	N/A
	8	Is Critical Item	Crit	N/A	N/A	N/A	N/A	N/A	Req	N/A	N/A	Req	Req	N/A	N/A
	9	Crew ID	CrewID	Req.	Req	Req	Req***	Req.***	Req	Req	Req	Req	Req	Req	Req
	10	Evaluation Date	EvalDate	Req.	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
	11	Airline Designator	AirDsgn	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
	12	FAA Fleet Designator	Fleet	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
	13	Training Program	TrPgm	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
	14	Curriculum	Curr	N/A	N/A	N/A	Req	Req	Req	Req	Req	Req	Req	Req	Req
	15	Evaluation Type	EvalType	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
	16	FAA Simulator ID	SimID	DES	DES	N/A	N/A	N/A	Req	Req	N/A	Req	Req	Req	N/A
	17	Evaluator ID	EvaltrID	DES	DES	DES	Req	Req	Req	Req	Req	Req	Req	Req	Req
	18	FAA Inspector ID	FAAID	DES	DES	DES	Req	Req	Req	Req	Req	Req	Req	Req	Req
	19	Random LC Geo. Area	GeoArea	N/A	N/A	Req	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Req
	20	Comments	Comment	Des	Des	Des	Des	Des	Des	Des	Des	Des	Des	Des	Des
	21	Crewmember ID	CmID	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
	22	Crew Position	CrewPos	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
	23	Evaluation Rating Type	EvalRtg	N/A	Req	Req	Req	Req	Req	Req	Req	N/A	Req	Req	Req
Skill Reason Table	5	Skill/Reason	SklRsn	Req	Req	Req	N/A	N/A	Req	Req	Req	Req	N/A	Req	Req
	24	Skill Reason Text	SklRsnText	Req	Req	Req	N/A	N/A	Req	Req	Req	Req	N/A	Req	Req

FIGURE 8-1. DATA SUBMISSION REQUIREMENTS (Continued)

Training Objectives Report Table	2	Measured Item ID	MItemID	N/A	N/A	N/A	Des	Des	Req	Req	Req	Req	Req	Req	Req
	25	Objective ID	ObjID	N/A	N/A	N/A	Des	Des	Req	Req	Req	Req	Req	Req	Req
	26	Objective Title	ObjTitle	N/A	N/A	N/A	Des	Des	Req	Req	Req	Req	Req	Req	Req
	27	Objective Type	ObjType	N/A	N/A	N/A	Des	Des	Req	Req	Req	Req	Req	Req	Req

Req - A required entry.
N/A - If no value is to be entered, use N/A. Leave no blank fields.
Des - Desired. This is optional information that is not required, but desired for submission. If not submitted, then N/A must be entered as the value.
* - See Notes in Data Reporting Format - Figure 8-2.
** - If there is no crew pairing for Systems or Procedures Val, submit the single CmID (No. 21) for the crewmember.

SVT - Single Visit Training
Qual - AQP Qualification Curriculum
CQ - AQP Continuing Qualification Curriculum
FL - First Look Maneuvers
PC - Proficiency Check
SV - Systems Validation
PV - Procedures Validation
MV - Maneuvers Validation
LOE - Line Operations
LC - Evaluation - Line Check

FIGURE 8-2. PERFORMANCE DATA REPORT TABLE (PDRT)

Table	No.	Field	Description	Short Name	Type	Field Size	Example(s)	Notes
PDRT	1	Measured Item	The task, maneuver, procedure, or event set statement.	Mitem	Text	80	Perform Engine Failure Procedure	1) This field will be N/A for Qual. SV and PV because these validations are usually graded pass/fail and recorded in field No. 23.
	2	Measured Item ID	An alphanumeric used to identify the task, maneuver, procedure or event set being graded.	MitemID	Text	12	1.2.1.3 or KK73456	1) This value is associated with a TPO, SPO, or event set. When it is a TPO or SPO, use the related number from the hierarchical numbering system. When it is an event set, enter the event set identifier. 2) This field will be N/A for Qual. SV and PV because these validations are normally graded in aggregate (pass/fail), and recorded in field No. 23.
	3	Measured Item Rating	The numeric rating assigned on the first attempt for each measured item.	Mrate	Numeric	1	3	1) Values depend on rating scale. 2) Do not provide records that are missing MRate: Provide only performance related information. Do not provide "Incomplete". 3) Reported rating must refer only to the first attempt of the measured Item, not the terminal performance. 4) * Use 9 instead of N/A for Qual. SV and PV. This is a numeric only field.
	4	Rating Meaning	A description of the Measured Item Rating	Rmean	Text	40	Satisfactory	1) The text meaning of each number in the rating scale.
	5	Skill/Reason	Link between the PDRT and SKLRSN tables	SklRsn	Text	90	B-737-LOE-5555-Taxi	1) This field is a unique record identifier that must be provided for Unsatisfactory Measured Item ratings (MRate) to provide a link to the Skill Reason table for single or multiple reasons for a failure. 2) This identifier can be a combination of the fields that make it unique. For example: Fleet+EvalType+CmID+MItem. As long as the identifier is unique to the record, it is the carrier's discretion to determine which fields are used. 3) If Mitem is satisfactory, insert N/A in this field.
	6	PF/PNF	Indicates whether the pilot performing the Measured Item was flying or not flying.	PFPNF	Text	3	PF or PNF	1) No entry requirement for FE, FA or DISP. 2) N/A for Qualification Curriculum Systems and Procedures Validation 3) * For FL, it is desired and encouraged that PNF data be submitted along with PF data. However, if significant grade sheet changes are necessary to accommodate this, only the standard PF items need be identified. For these airlines, the value entered for all FL Measured Items will be "PF". 4) This field is desired for Qual. and CQ Maneuvers Validation, however, if PNF is not submitted then the value will be "PF".

	No.	Field	Description	Short Name	Type	Field Size	Example(s)	Notes
	7	Is currency Item?	Indicates whether the Measured Item is a currency item.	Currcy	Text	3	Yes, No or N/A	1) N/A is used when the Measured Item is an Event Set.
	8	Is Critical Item	Indicates whether the Measured Item is a critical item.	Crit	Text	3	Yes, No or N/A	1) N/A is used when the Measured Item is an Event Set.
PDRT	9	Crew ID	The de-identified alphanumeric assigned to a specific pairing of crewmembers that will be maintained for the duration of a curriculum, unless the crew make-up changes or a seat substitute is present.	CrewID	Text	40	P21234 SIC F12312	1) CrewID N/A for FA's, IRO's or dispatchers. 2) CrewID is the concatenation of the CmID's (#21) of all crewmembers present. Order of ID's: PIC SIC FE. 3) If two PICs or SICs are trained together use the structure PIC PIC FE, or SIC SIC FE, as appropriate, separated by spaces. 4) If there is no crew pairing for Systems or Procedures Val, submit the single CmID (#21) for the crewmember. 5) Maintain CrewID in exact form and order, except for seat substitutes. For seat subs, use Crew Position (No. 22) values relative to the seat position in the CrewID sequence. For example, P21234 SIC F12312 would indicate that the first office position was a seat substitute.
	10	(MM/YYYY)	The month and the year the Measured Item data is collected.	Date	Date	7	10/2001	1) Set the date field format in Access to month/year; use full century: MM/YYYY. 2) The day value will default to 01.
	11	Airline Designator	The airline's four character designator reporting the measured items.	AirDsgn	Text	4	XYZA	
	12	FAA Fleet Designator	The FAA designation of the fleet or equipment type relevant to the Measured Item.	Fleet	Text	20	B-737	1) See Airline/Fleet Designator Menu
	13	Training Program	The training program relevant to the Measured Item.	TrPgm	Text	4	AQP or SVT	
	14	Curriculum	The AQP curriculum in which the Measured Item is being validated or evaluated.	Curr	Text	4	Qual, CQ or N/A	1) N/A for SVT.

PDRT

No.	Field	Description	Short Name	Type	Field Size	Example(s)	Notes
15	Evaluation Type	The evaluation type in which the Measured Item is accomplished.	EvalType	Text	4	FL, PC, SV, PV, MV, LOE, LC	
16	FAA Simulator ID	The FAA simulator ID number of the simulator where the Measured Item is performed.	SimID	Text	4	1234 or N/A	1) If a simulator is not used, enter N/A
17	Evaluator ID	The identification number of the evaluator who graded the Measured Item.	EvaltrID	Text	15	123456	1) If an FAA inspector is the evaluator, use the FAAID in this field and in the FAA Inspector ID field, No. 18.
18	FAA Inspector ID	The Form 110A number of the aviation safety inspector who observed the Measured Item.	FAAID	Text	4	1234	1) Report the FAA ID Number (110A) of a FAA inspector who is there as an observer and/or evaluator (#17). If no FAA inspector is present, enter N/A.
19	Random Line Check Geographic Area	The geographic area where the Measured Item is collected for Random Line Checks.	GeoArea	Text	30	Pacific	1) Use geographic descriptors as define by the airline. 2) This field is only required for airlines with approved Random Line Check programs otherwise enter N/A.
20	Comments	Additional comments submitted by evaluator.	Comment	Memo			1) The comment field provides further explanation of unsatisfactory or outstanding measured Item Rating. 2) Evaluator comments are provided to AFS-230 at the discretion of the airline, unless otherwise require in accordance with the approved airline's AQP. 3) If there are no comments, enter N/A.
21	Crewmember ID	The de-identified alphanumeric assigned for the duration of a curriculum to the crewmember performing the measured item.	CmID	Text	10	P123456	1) Begin all PIC ID's with P, Sic ID's with S, FE ID's with F, FA ID's with A, dispatcher ID's with Des, and IRO ID's with R. 2) The P, S, or F refer to the position for which the pilot in training is being qualified, not necessarily the seat occupied.
22	Crew Position	The "seat" occupied by the person performing the Measured Item.	CrewPos	Text	4	PIC	PIC = Pilot in Command; FA = Flight Attendant; SIC = Second in Command; DISP = Dispatcher; FE = Flight Engineer; IRO = International Relief Officer E.g., a SIC in the left seat would be entered a PIC.

	23	Evaluation Type Rating	The overall rating the pilot performing the Measured Item received for the evaluation type.	EvalRtg	Text	5	Sat or Unsat	1) Rating must refer to the first execution of the evaluation type. Repeated sessions are not reported in this table.

FIGURE 8-3. SKILL/REASON TABLE (SKLRSN)

Table	#	Field	Description	Short Name	Type	Field Size	Example(s)	Notes
SklRsn	5	Skill/Reason	Link between the PDRT and SKLRSN tables	SklRsn	Text	90	B-737-LOE-5555-Taxi	1) This field is a unique record identifier that must be provided for Unsatisfactory Measured Item ratings (MRate) to provide a link to the Skill Reason table for single or multiple reasons for a failure. 2) This identifier can be a combination of the fields that make it unique. For example: Fleet+EvalType+CmID+ MItem.. 3) As long as the identifier is unique to the record, it is the carrier's discretion to determine which fields are used. 4) None of the component fields can contain a N/A value.
	24	Skill reason Text	A description of the skill or reason for assigning an unsatisfactory Measured Item rating.	SklRsn Text	Text	40	Technical CRM Procedural	1) Provided for Unsatisfactory Measured Item Ratings from the carrier's Reason Codes. 2) If more than one skill or reason is relevant, allow one field for each skill or reason. 3) Enabling Objectives (EO's) are acceptable as skill descriptors.

FIGURE 8-4. TRAINING OBJECTIVES REPORT TABLE (TORT)

Table	#	Field	Description	Short Name	Type	Field Size	Example(s)	Notes
TORT	2	Measured Item ID	An alphanumeric used to identify the task, maneuver, procedure or event set being graded.	MitemID	Text	12	1.2.1.3 or KK73456	1) This value is associated with a TPO, SPO, or event set. When it is a TPO or SPO, use the related number from the hierarchical numbering system. When it is an event set, enter the event set identifier. 2) This field will be N/A for Qual. SV and PV because these validations are normally graded in aggregate (pass/fail), and recorded in field No. 23.
	25	Objective ID	An alphanumeric assigned to each terminal or supporting objective tested by the Measured Item.	ObjID	Text	12	3.2	1) List all the TPO's, SPO's or other high level objective grouping that apply to the Measured Item.
	26	Objective Title	A description of the objective ID	ObjTitle	Text	80	Perform Engine Fire Procedures	1) A description of the objective ID in field No. 25.
	27	Objective Type	A description of the objective type	ObjType	Text	5	TPO or SPO or EO	1) Identify the training objective as a TPO, SPO, or EO.

CHAPTER 9. CREW RESOURCE MANAGEMENT

SECTION 1. INTRODUCTION

9-1. OVERVIEW. Crew resource management (CRM) training develops skills that enhance flight safety through the effective use of all available resources: human, hardware and information. CRM training increases awareness of human and system error and provides techniques and skills that will minimize their effects. This is accomplished through awareness of crewmember attitudes and behavior as well as the use of practical flight management skills. CRM training has achieved a greater degree of integration through the Advanced Qualification Program (AQP). This chapter describes the integration of CRM training into pilot training curriculums using the instructional systems development methodology that forms the foundations of the AQP process. The approach demonstrates how the analytical methodologies in AQP have the potential to produce more rigorous CRM training, including the appropriate integration of CRM and technical training.

SECTION 2. INTEGRATING CRM INTO AN AQP

9-2. SCOPE OF INTEGRATION. One of the major objectives of AQP is the seamless integration of CRM and technical training. Where appropriate, CRM procedures are identified, documented, integrated, and accorded the same weight as the technical procedures required for the execution of a given phase of flight and its associated flight tasks.

a. However, integration does not mean that only those aspects of CRM that can be proceduralized are addressed in flight operations technical training and evaluation. Some aspects of CRM are inherent to maneuver performance, and have already been proceduralized. For example, communication procedures for coordinating callouts during takeoffs, approaches, and other maneuvers are specified in terms of what should be said and when it should be said. These callouts take place during most flight phases and are performed at fixed points in the flight-phase sequence of task activities. Similarly, some aspects of communication during the management of non-normal conditions can be easily positioned within the sequence of activities performed to manage the non-normal condition.

b. Other equally important CRM activities, in contrast, are performed on an as-needed basis, in order to manage the flight, work well as a team, or respond to unique situations. Recognizing the need for, and effectively executing these activities, is critical to coordinating the various duties the crew must perform during the flight. For example, certain communications should be performed in order to maintain crew awareness of flight status. Regardless of the phase of flight, it is critical that the crew recognize this communication requirement and effectively act upon it in a timely manner to maintain crew situational awareness.

c. These global activities do not fit neatly within a hierarchical list of technical activities, organized by phase of flight. Instead, they act as a “shell” or “template” that overlays and organizes the activities that may need to be performed during any phase of flight. These skills as a whole constitute a management strategy that represents a critically important part of the

inventory of defenses against error that crews bring with them to the flightdeck. In particular, they can provide the crew with the tools needed to resolve problematic situations to which they may never have been previously exposed in training or in flight operations. It is important, therefore, that training activities seek to fully instill these skills in crews, in order to provide a basis for generalization to a potentially wide variety of situations. Figure 9-1 contains samples of some of these phase-of-flight independent CRM skills.

9-3. CRM/AQP TASK LIST. The AQP task list reflects the air carrier's definition of the flightcrew's job, including the role that CRM is expected to play in the performance of that job. This job definition specifies the task activities, the knowledge, and the skills that must be trained to achieve and maintain pilot and other crewmember proficiency. Because of the fundamental role played by the task list, it should provide a comprehensive specification of the various task activities that constitute the job, and the knowledge and skills required in performing those task activities, both technical and CRM. In terms of the task list, this means that there are CRM task activities just as there are technical task activities. All of the technical and CRM task activities that must be performed to support these high-level task activities can now be identified. The high-level task activities, which also act as objectives, serve as a type of template that will overlay the specific procedures for handling each condition. High-level CRM task activities act as the framework within which technical activities are positioned to support management objectives.

9-4. CRM KNOWLEDGE AND SKILLS. A CRM skill represents the ability of a person to apply specific CRM knowledge across a broad range of flight situations. In AQP, these CRM skills are combined to develop proficiency objectives. Once the carrier has identified the set of task activities appropriate for defining the flightcrew's job (from the task list), these activities then provide the framework for identifying the CRM knowledge and skills that a pilot or crew must possess in order to effectively perform each task activity. Two approaches are commonly used to identify CRM knowledge and skills:

a. Top-Down. This approach uses the CRM categories chosen by the carrier, or presented in the CRM Advisory Circular (AC), to identify the set of CRM knowledge and skills. The resulting knowledge and skills can then be attached to those task activities whose performance they support.

b. Bottom-Up. This approach identifies CRM knowledge and skills by analyzing each individual task activity. The task activity's structure determines the knowledge and skill requirements. This approach has the advantage that it defines an inherent link between the task activity and its knowledge and skills.

9-5. CRM AND PROFICIENCY OBJECTIVES. Once the task list has been completed, the proficiency objectives can be identified for that job. Two types of proficiency objectives may be used: ground training enabling objectives, which reflect the subject matter a flightcrew must know; and flight training terminal, supporting, and enabling objectives, which reflect the activities a flightcrew must be able to do. Appropriate integration of CRM into both ground and flight proficiency objectives ensures that the range of CRM issues important to the carrier will be

addressed both in training and in evaluation by means of the performance standards included in the proficiency objectives.

9-6. TRAINING EVENTS. The complete set of proficiency objectives defines the end result of training: the task activities the crew must be able to perform, the set of conditions under which they must be able to perform them, the performance standards that must be met, and the evaluation strategy that will be used to evaluate proficiency. They do not, however, describe the specific training situations and activities that will be used to achieve this end result, especially in terms of flight training. One means for specifying the set of flight training situations to be included in a curriculum is by means of events. The suggestion that flight training and testing activities should be developed around a set of events was formalized in 1994 by an industry group tasked to recommend a systematic approach for developing line operational simulation (LOS) scenarios under AQP. The event set methodology has achieved wide acceptance because of its analytical approach to scenario design and its reinforcement of the use of realistic line conditions that enable crews to practice the full range of flight-management skills. The effectiveness of the event set methodology for integrating technical and CRM training objectives suggests that an event orientation throughout the curriculum, rather than just in line operational flight training (LOFT) or line operational evaluation (LOE), could offer important advantages.

9-7. EVENT SETS. The primary unit of both LOS design and CRM assessment is the event set. The event set is made up of one or more events, including an event trigger, distracters, and supporting events. The event trigger is the condition or conditions under which the event is fully activated. The distracters are conditions inserted within the event set time frame that are designed to divert the crew's attention from other events that are occurring or are about to occur. Finally, supporting events are other events taking place within the event set designed to further CRM and technical training objectives. In LOS scenario design, the CRM and technical training objectives should be integrated into the event sets. This event set framework allows the design team to present the appropriate degree of realism in the LOS. Instead of focusing on a specific technical issue, the event set integrates the entire complex line environment (e.g., terrain, air traffic control (ATC), weather issues, etc.) to facilitate and maximize the crew's performance in response to specified CRM and technical issues. The event set tends to follow the phase of flight and may extend beyond a single phase. This event set framework provides a logical breakdown for terrain, ATC, and weather issues as they interact with LOS events. With the LOS scenario now defined by event sets, scenario validation is performed at the event set level rather than limiting validation to the overall LOS. A sample event-set development worksheet is shown in Figure 9-2.

9-8. SOURCE. The carrier's safety information system (incident reports, Aviation Safety Action Program (ASAP) reports, Flight Operational Quality Assurance (FOQA) data, line check data, etc.) is an important source for events and event sets. The conditions that encouraged the occurrence of an incident can be replicated in flight training or discussed in ground training. The purpose is to educate pilots about the types of conditions that can increase the likelihood of an error, to present strategies for avoiding these errors, and techniques for recovering from them, should they occur.

9-9. CURRICULUM DESIGN. Curriculum design is the final product of the AQP analyses performed to this point: what is the job, what is proficiency on the job and how is it measured, and what training opportunities should be provided to achieve proficiency. The curriculum layout reflects the products of these analyses. Much of the work involved in designing a curriculum has been accomplished through the preparation of the task list, proficiency objectives, and events. If objectives and events have been developed, the design of the curriculum is largely complete, except for choosing the specific locations within the syllabus for the individual elements.

9-10. INDOCTRINATION CURRICULUM. CRM training is likely to be integrated into indoctrination training in two ways. A separate CRM portion might be appropriate to address the philosophical issues pertaining to captain's and first officer's authority, and corporate expectations concerning professionalism and individual responsibility. CRM is also likely to play a supporting role in other portions, such as weather. The decision processes involved in managing severe weather conditions provides an appropriate flight management context for addressing operational issues pertaining to weather.

9-11. QUALIFICATION CURRICULUM. Qualification training will likely use a different set of training topics. These topics could reflect the transition from knowledge acquisition to skill acquisition and, finally, to skill application. If so, the topics will reflect the following learning stages:

a. Knowledge. This includes basic awareness training concerning the nature of the skills, their value, strategies for using them, and ways to assess the effectiveness of skill use. Presenting the different roles that could be played by each crewmember sets the stage for later events where the crew must actually assume the appropriate roles for that situation.

b. Procedures. This training includes the proceduralized aspects of CRM.

c. Maneuvers. This training can extend beyond simply practicing individual maneuvers so as to encompass situation assessment, planning, workload distribution, and other critical CRM skills.

d. Flight Management. This training requires the strategic use of multiple skills adapted to the requirements of the situation and the accurate assessment of skill effectiveness in managing the situation. Effectively accomplishing such training requires a systematic approach to the development of scenario events designed to elicit complex crew skills

9-12. CONTINUING QUALIFICATION CURRICULUM. This curriculum has two goals: to evaluate pilot and crew proficiency, and to provide supplemental training. Because of the severe time constraints imposed on this curriculum, only "snapshot" samples of pilot and crew performance are possible. If a flight-management framework has been used to prepare the task list and proficiency objectives, the performance samples could use an event-based approach that gauges pilot and crew performance for procedures, maneuvers, and flight management.

9-13. LINE OPERATIONS AND PROCEDURALIZED CRM. Developing and teaching specific observable actions that would be required in the execution of specific activities at designated points in normal flight operations, as well as during abnormal or emergency conditions, can enhance the crew's ability to communicate effectively, plan, and manage their workload, and solve problems during flight operations. A procedural approach may raise key aspects of CRM to the level of standard operating procedure (SOP), which increases CRM's operational significance and provides crews with a standard form of CRM. CRM procedures may be embedded in a range of crew activities through the different phases of flight, reducing distractions to the pilot flying (PF) in both normal and abnormal situations. Also, providing structure to briefings with a checklist format can enhance the crew's performance and improve the transfer of critical information.

SECTION 3. EVALUATING CRM

9-14. OVERVIEW. The training developed for AQP reflects the corporate philosophy as to how the job is to be performed, including the identification of observable behaviors that serve as the basis for evaluation. The use of a flight management philosophy during the development of training curricula and during the actual training supports an outcome-oriented assessment of skill use. Effective task activity performance is defined within the context of achieving predefined flight objectives. This approach supports the definition of objective standards that can serve as the basis for evaluation, and provides a consistent foundation on which to evaluate both CRM and technical skills.

9-15. OBSERVABLE BEHAVIORS. Observable behavior is a specific action employing a CRM skill in a given situation. Evaluation of individual pilot and crew CRM proficiency is possible through the inclusion of observable behaviors in the evaluation criteria that reflect performance on CRM-related task activities. These observable behaviors are defined for both the proficiency objectives and the events. Evaluation of CRM skills is possible if the event sets used in the evaluation process address these skills and incorporate appropriate observable behaviors in the performance standards.

FIGURE 9-1. SAMPLE CRM SKILLS

Exercise Captain's Authority or Responsibility	Distribute workload and prioritize between primary and distracting duties.
	Communicate plans and decisions to the crew.
	Enforce standardization, policies, and procedure
	Set expectations for maintaining vigilance and avoiding complacency.
	Respond to any safety-related concern raised by any crewmember.
	Develop and enhance the aviation skill and knowledge of junior crewmembers.
	Review operational irregularities and establish bottom lines.
	Communicate intentions, "bottom lines," and decisions to all crewmembers.

Fulfill First Officer or Flight Engineer Responsibility	Cross-check and back the captain up. This requires maintaining vigilance and flying proficiency. It also includes effective monitoring of the situation
	Report to the captain any safety-related concern and request a plan or decision if none is articulated.
	Support decisions articulated by the captain within the limits of safety, legality, and procedure.
	Develop your proficiency and take the best from each captain you work with.

Maintain Situation Awareness	Prepare, plan and maintain vigilance—be prepared for what you can reasonably expect
	Carry out actions or decisions based on priorities and crew workload established by the captain.
	Identify systemic traps.
	Be aware of the limits of human performance and the nature of human error.

Establish Effective Communications	Conduct or contribute to briefings—keep your head in the game and work to get ahead of it
	Maintain a communications "loop"—acknowledge commands, statements, and questions of crewmembers.
	Use resources appropriately to make informed decisions.
	Resolve disagreements or differences in expectations—ensure that all crewmembers are working from the "same page."
	Manage errors appropriately to mitigate consequences.
	Continuously review the appropriateness of decisions made and actions taken.
	Debrief critical flight events—take the opportunity to learn from unusual events by reviewing the expectations and actions of all cockpit crewmembers at the end of the flight.

FIGURE 9-1. SAMPLE CRM SKILLS (Continued)

Develop and Maintain Teamwork	Establish appropriate duties and responsibilities by crew position.
	Back each other up through effective cross-check and acknowledgment.
	Demonstrate motivation appropriate to the situation—transition between casual conversation and focused flight communication based on the need to prepare and execute your flight. This entire range is appropriate at different points in flight.
	Protect crewmembers from the consequences of work overload.
	Effectively coordinate with other groups: gate agents, dispatch, ground crew.
	Apply judgment in use of automated systems and modes.
	Operate the airplane using different levels of automation as appropriate to the situation.
	Verify that automation is doing what you expect and act to control it when it does not.
	Intervene to control autoflight.
	When using automation, back each other up (verify settings, state intentions, establish roles).

FIGURE 9-2.
SAMPLE EVENT SET WORKSHEET

A340 EVENT SET NUMBER 101 WORKSHEET
(FROM A340 R L 03-02 LEG 1)

OVERVIEW. Low Visibility takeoff and climb with a reroute and a TCAS event **Phase of Flight:** Takeoff through Climb			**SUCCESS CRITERIA**	
	TPOs and SPOs	**Conditions**	**Technical Skills and Observables**	**CRM Skills and Observables**
Trigger: Departure weather, 200 overcast, RVR 1500. Distracters: TCAS RA, shortly after takeoff. Supporting Events: Reroute and climb restriction Difficulty Equivalency Rating: Low Visibility takeoff - IMC - 4 FMS – 1 TCAS – 3 Total - 8	Low Visibility takeoff operations (2.1) Proper cleanup profile. (2.1.4) Perform TCAS RA avoidance (9.1.28) Perform climb operations. (3.1)	Take Off Thrust - Normal IMC weather	Proficient in use of FMS and Autopilot Flight Director System. (9.1.11) (9.1.13) Accomplishes takeoff/climb procedures IAW SOP. (2.1.1) (2.1.2) (2.1.3) (2.1.4) (3.1.1) (3.1.2) Appropriate response to TCAS Alert (9.1.28)	Crew coordinates for airspeed and altitude changes. (SA 3.4) Crew verbalizes and acknowledges changes in the altitude selector window. (AT 6.4) PF coordinates with PM in the use of automation. (AT 6.6)

APPENDIX 1.
DEFINITIONS

APPLICANT. A Title 14 of the Code of Federal Regulations (14 CFR) part 119 certificate holder that is required to have a training program under 14 CFR part 121, section 121.401, or part 135, section 135.341. A part 142 training center that applies to conduct training and evaluation for an eligible certificate holder under an Advanced Qualification Program (AQP).

ATTITUDE. A persisting internal mental state that influences an individual's choice of personal action toward some object, person, or event. .

CERTIFICATE HOLDER. Holder of an operating certificate and operations specifications that authorize 14 CFR part 121 or part 135 operations.

COGNITIVE SKILLS. Those intellectual skills that are prerequisite to the performance of a task, subtask, element, or sub-element. The three primary categories of cognitive skill are discrimination, concept learning, and rule using.

CONDITION. One of the three primary components of a proficiency objective: performance, condition, and standard. The conditions describe the range of circumstances under which student performance will be measured and evaluated. Conditions may include the natural environment (ceiling, visibility, wind, turbulence, etc.), the operational environment (navigational aid (NAVAID) inoperable, conflicting air traffic, gate change, passengers not seated, etc.), or operational contingencies (abnormal situations and emergencies).

COURSEWARE. All instructional material a learner requires to complete a curriculum, in whatever media required, including manuals, visual aids, lesson plans, flight event descriptions, computer software programs, audiovisual programs, workbooks, handouts, etc.

CREW RESOURCE MANAGEMENT (CRM). The effective use of all available resources human resources, hardware, and information to achieve safe and efficient flight. For additional information, see AC 120-51, Crew Resource Management Training, as amended.

CRITICALITY. A terminal proficiency or supporting objective for which the substandard task performance would adversely affect safety. The relative need for awareness, care, exactness, accuracy, or correctness during task performance. Critical tasks must be accomplished more frequently in training and evaluation than non-critical tasks.

CURRENCY. A terminal proficiency or supporting objective for which individuals and/or crews can maintain proficiency by repeated performance of the item in normal line operations. For pilots, most currency items may be validated during line checks, while most non-currency items must be demonstrated during training, validation, or evaluation events in a simulator or flight training device (FTD).

CURRICULUM. A portion of an AQP that covers one of three program areas: indoctrination, qualification, and continuing qualification. Qualification and continuing qualification program

areas may include upgrade, transition and requalification curriculums. The indoctrination program area addresses activities that are general in nature and are not aircraft or duty position specific. The qualification and continuing qualification programs address the required training and qualification activities for each specific make, model, and series aircraft (or variant) and for a specific duty position.

CURRICULUM DESIGN. The activities involved in organizing, clustering, sequencing and otherwise structuring the elements of instruction (objectives, lessons, evaluations, etc.) into an orderly flow of learning experiences to facilitate student performance.

CURRICULUM SEGMENT. An integral part of a curriculum, which can be separately evaluated and individually approved, but by itself does not qualify a person for a duty position. (e.g., ground training segment, flight training segment, evaluation segment). The first level of curriculum detail (segment, module, lesson, and lesson element).

DE-IDENTIFIED DATA. Data that cannot be linked with a named individual.

DUTY. All the actions (tasks, subtasks, etc.) required by one's position or occupation.

DUTY POSITION. The operating position of a crewmember, or other person. Includes seat dependent tasks. For operations under part 121 and part 135, duty positions include pilot-in-command (PIC), second-in-command (SIC), flight engineer (FE), flight navigator, instructor and evaluator, aircraft dispatcher, flight attendant, or other ground operations personnel such as those dealing in security or hazardous materials.

ELEMENT. A component of training analysis or design. In the case of task analysis, the element may be used as a level of analysis: phase of flight, task, subtask, element, sub-element, etc. In the case of curriculum design, the element may be used as a level of curriculum organization: curriculum, segment, module, lesson, lesson element, etc.

ENABLING OBJECTIVE (EO). A lower level learning objective that helps students master a higher level objective, such as a supporting or terminal level objective. The knowledge and skill prerequisites of maneuvers and procedures are usually trained as enabling proficiency objectives.

EVALUATION. Careful appraisal of an individual's performance by an evaluator to ascertain whether the standards required for a specified level of proficiency have been demonstrated.

EVALUATION OF PROFICIENCY. In AQP, this is a line operational evaluation (LOE) or an equivalent evaluation acceptable to the Administrator.

EVALUATION PERIOD. A period within the continuing qualification cycle during which each person must receive at least one training session and a proficiency evaluation. The initial continuing qualification cycle for any curriculum will be 24 months (plus or minus the 1 month grace period), and will contain two 12-month (plus or minus the 1 grace month) evaluation periods.

EVALUATOR. A person who assesses the performance of crewmembers, instructors, other evaluators, aircraft dispatchers, or other operations personnel. An evaluator must have satisfactorily completed the certificate holder's AQP evaluator training. All evaluators must be approved by the Administrator.

EVENT SET. A relatively independent segment of a scenario made up of several events, including an event trigger, possible distracters, and supporting events.

FLIGHT TRAINING. Training given in the aircraft, flight simulator, FTD, or other cockpit environment. See ground training.

FLIGHT TRAINING EQUIPMENT. Aircraft, flight training devices, or flight simulators that are used for any of the following purposes: (1) Required evaluation of individual or crew proficiency; (2) Training activities that determine if an individual is ready for an evaluation; (3) Activities used to meet recency of experience requirements; and (4) line operational simulations (LOS).

FORMATIVE EVALUATION. Process of reviewing courseware for technical accuracy, instructional soundness, and suitability for use by instructor, evaluator, and student. Dry run of the total curriculum with a small group of students to test the effectiveness and efficiency of the training (e.g., small group tryout).

FREQUENCY. Number of occurrences of a task/subtask in a specific period of duty (one flight, one trip, 1 month, 1 year, etc.) How often a task/subtask is performed. Frequency may be used to determine currency (see currency) by comparing the frequency with which activities occur on the line, with the frequency required to maintain proficiency without additional training.

GROUND TRAINING. Aviation/aircraft specific training provided in a classroom, learning center, lecture hall or other traditional educational setting that occurs outside the cockpit environment.

INSTRUCTIONAL ANALYSIS. A process conducted during the design of instruction to identify the presentational components, or learning events, necessary for the student to master the complete range of skills, knowledge, attitudes, abilities, and CRM factors required for proficient performance.

INSTRUCTIONAL SYSTEMS DEVELOPMENT. A systematic methodology for deriving and maintaining qualification standards and associated curriculum content based on a documented analysis of the job tasks, skills, and knowledge required for job proficiency.

JOB. A job is the summation of functions, identified as tasks and subtasks, performed by an individual at work.

KNOWLEDGE. Specific information required to enable a student to develop the skills and attitudes to effectively recall facts, identify concepts, apply rules or principles, solve problems,

and think creatively. Because knowledge is covert, students must be assigned overt activities to demonstrate their knowledge base.

LESSON. A meaningful division of learning consistent with the method of study, learning, or testing of performance (proficiency) objectives. The third level of curriculum definition (segment, module, lesson, lesson element). Lessons usually contain objectives, training events, student materials, instructor materials, and an evaluation scheme or form.

LESSON ELEMENT. A subgroup of activities within a lesson. It is the fourth level of curriculum detail (segment, module, lesson, and lesson element).

LINE OPERATIONAL EVALUATION (LOE). The LOE is the primary proficiency evaluation. This evaluation addresses the individual's ability to demonstrate technical and CRM skills appropriate to fulfilling job requirements in a full mission scenario environment. The intent of an LOE is to evaluate and verify that an individual's job knowledge, technical skills, and CRM skills are commensurate with AQP qualification standards. The LOE is conducted in a simulation device approved for its intended use in the AQP. Under extenuating circumstances, the AQP proficiency evaluation may be accomplished in an aircraft, subject to FAA approval

LINE OPERATIONAL SIMULATION (LOS). A simulator or FTD training session conducted in a "line environment" setting. LOS includes line oriented flight training (LOFT), line operational evaluation (LOE), special purpose operational training (SPOT). For additional information, see AC 120-35, Line Operational Simulations: Line Oriented Flight Training, Special Purpose Operational Training, Line Operational Evaluation, as amended.

LINE ORIENTED FLIGHT TRAINING (LOFT). A LOS flight scenario designed for training purposes to provide practice in the integration of technical and CRM skills. LOFT is conducted using a complete cockpit flightcrew to the maximum extent feasible and is accomplished in an FAA-certified simulation device. For additional information, see AC 120-35, as amended, Line Operational Simulations.

MANAGER OF VOLUNTARY SAFETY PROGRAMS (VSP). Refers to the manager of AFS-230.

MEDIA. Physical means for providing the instructional content and experience to the student. Includes entire set of instructional presentation materials (e.g., workbook, videotape, overheads, computer-based training (CBT), mock-ups, FTDs, simulators, etc.).

MODULE. A group of subject matter under a specific curriculum segment. Second of four curriculum levels of detail (segment, module, lesson, and element). Often corresponds to a day of training or a device event, such as FTD #3 or flight simulator (SIM) #6).

MOTOR SKILL. Physical actions required to perform a specific task (subtask or element). Students have acquired a motor skill not when they can simply perform a prescribed procedure, but when their movements are smooth, regular, and precisely timed. Those hands-on skills that are prerequisite to the performance of a task, subtask, element, or sub-element.

OBSERVABLE BEHAVIOR. A behavior whose occurrence during the performance of an event is an indicator that the crew is handling the event properly. Observable behaviors are one part of the performance standards identified for each event.

PLANNED HOURS. Planned hours represent the estimated amount of time (as specified in a curriculum outline) that it takes an average student to complete a segment of instruction (to include all instruction, demonstration, practice, and evaluation, as appropriate, to reach proficiency). Planned hours replace the programmed hours associated with traditional programs. The sum of planned hours will not used by the FAA as a basis for program approval, review, or compliance assessment.

PROTEUS. A software program containing formats, functionality, procedures, and sample documents designed to guide and automate portions of the development of AQPs.

RANDOM LINE CHECK. Granted by exemption. A no-notice (not scheduled and with no prior notification) proficiency assessment of an entire flightcrew's operational proficiency conducted by an evaluator during part 121 or part 135 revenue flight operations or during operationally oriented flight, such as ferry flights or proving flights.

SKILL. An ability to perform an activity or action. Often divided into motor/hands-on and cognitive categories.

SPECIAL PURPOSE OPERATIONAL TRAINING (SPOT). A portion of an LOS training scenario consisting of flight tasks selected from any phase or phases of flight to provide practice in the integration of technical and CRM skills appropriate to the selected flight tasks. SPOT is conducted using a complete cockpit flightcrew to the maximum extent feasible and is accomplished in a simulation device. For additional information, see AC 120-35, as amended.

SUBTASK. Specific separate step or activity required in the accomplishment of a task. May also refer to categories of a task (e.g., non-precision approach – VOR, NDB, LOC, etc.)

SUPPORTING PROFICIENCY OBJECTIVE (SPO). A proficiency objective created at the subtask level.

TASK. A task is a unit of work within a function having an identifiable beginning and ending point, which results in a measurable product. An example of a task applicable to AQP: perform a normal takeoff.

TECHNICAL SKILLS. Within an AQP, technical skills refer to those maneuvers, procedures and other behaviors that have a high psychomotor component, while CRM skills refer to those communication, decision-making and workload management behaviors that have a high cognitive component.

TERMINAL PROFICIENCY OBJECTIVE (TPO). A proficiency objective created at the task level.

TPO/SPO HIERARCHY. The hierarchy of all TPOs and SPOs organized by phase of flight in the Proteus database.

TRAINING SESSION. A contiguously scheduled period of time devoted to training activities at a facility acceptable to the Administrator for that purpose.

TRAINING TO PROFICIENCY. Training to a performance level that meets or exceeds a qualification standard. This concept must include enough repetition and practice to ensure that each individual can perform at the qualification standard level over the entire evaluation period or continuing qualification cycle.

TRIGGERING CONDITIONS. The conditions whose occurrence defines the beginning of an event.

VALIDATION. Determination that required/desired results were produced. In training systems, the methods and procedures for development, implementation and maintenance as well as performance objectives and results will be validated.

VARIANT. A specifically configured aircraft for which the Administrator has identified training and qualification requirements that are significantly different from those applicable to other aircraft of the same make, model, and series.

APPENDIX 2.
GENERIC AIRLINES ADVANCED QUALIFICATION PROGRAM APPLICATION

Date, 2005

(Insert name of the current manager, Voluntary Safety Programs Branch, AFS-230)
Manager, Voluntary Safety Programs Branch
FAA/AFS-230
P.O. Box 20027
Washington, DC 20041-2027

Subject: Initial Application for Advanced Qualification Program

Dear (insert name of the current manager, Voluntary Safety Programs Branch, AFS-230):

The purpose of this letter is to inform you that _____ Airline intends to develop, implement and operate an Advanced Qualification Program (AQP) curriculum, beginning with our _____ aircraft fleet. We have examined and understand the Advanced Qualification Program requirements, listed in 14 CFR part 121 subpart Y and FAA Advisory Circular 120-54A, Advanced Qualification Program. This letter serves as _____ Airline's formal application to engage in the five-phase development process of an AQP, which is an alternative regulatory method of training, evaluating and qualifying our flight (crewmembers) (dispatchers).

Our airline will develop its AQP training program in accordance with the performance-based methodology that is described in Advisory Circular 120-54A. The initial development process will include at least the following AQP documents: Initial Job Task Listing; Qualification Standards; Instructional Systems Development Methodology; Curriculum Outlines, and an Implementation and Operations Plan. All AQP documentation will be submitted to the FAA Extended Review Team (CHDO and AFS-230) for its review and joint approval. It will also show how our proposed AQP curriculum provides an equivalent or enhanced level of safety for each traditional regulation requirement that is replaced by our AQP.

- We see our voluntary commitment to AQP as an important safety goal. To achieve that goal, and to facilitate a safe and timely transition to AQP, _____ Airline will commit the appropriate personnel and resources to complete the task, and to continuously maintain the program in the future. Accordingly, in support of this application, we submit the following attachments:

- AQP Organization and Database Management Plan, which describes the multiple resources that our airline plans to employ for its AQP development. This attachment identifies the airline's leadership person for AQP implementation, and delineates the staff of key subject matter experts who will be tasked with phase II document and curriculum development, including electronic database management and other computer-related issues. The detailed AQP organization plan reflects our commitment to the goal of achieving each requirement that is unique to a successful AQP implementation.

- A summary of demographic data of our crews, who will be trained under an AQP curriculum. This data includes the current ground and flight instructors and evaluators who are expected to continue these functions under AQP.

- An operating environment description that articulates our airline's geographic areas of operation, general environmental factors, plus other operational factors which may be critical to development of meaningful proficiency objectives and line operational simulations (LOS).

- A description of our training equipment, its location, and the organization responsible for its security and maintenance. Also included: the FAA identification number assigned by the National Simulator Program Manager and the level of qualification identifying flight simulators and/or flight training devices.

- A description of our training facilities including the location, type of facility, classrooms, training aids, courseware, and other features that contributes to creating and maintaining a positive learning environment.

The attached Master AQP Transition Schedule (MATS) describes our timeline for completion of the transition process from our current training program to an AQP. The MATS will be maintained as a current document.

We do/do not intend to apply for a single visit exemption (SVE) to facilitate transition to AQP. The point of contact for our AQP development will be _____, and he/she may be contacted at _____, or through e-mail _____.

Sincerely,

VP of Fight Operations or Chief Operation Officer,
Generic Airline

Attachments: (1) Organization and Database Management Plan; (2) Airline Operational Environment; (3) Demographic Data; (4) Training Equipment Description and Location; (5) Facilities Description; and (6) MATS.

APPENDIX 3.
REGULATORY COMPARISON CHART/
PART OF THE QUALIFICATIONS STANDARDS DOCUMENT

Regulatory Variances

The Advanced Qualification Program (AQP) allows development of proficiency-based training programs that encourage innovation in the methods and technologies used during instruction and evaluation, as well as efficient management of the training systems. Since these innovations may require some deviations from the current regulations, the approved qualification standards replace the applicable portions of the existing Title 14 of the Code of Federal Regulations (14 CFR) part 121 regulations and other FAA training guidance as the definitive basis for the training program. This section describes the variance from current regulations approved for XYZ's AQP qualification and continuing qualification curriculums.

Chapter 2 Regulatory Variations

Title 14 CFR part 121, section 121.401(c)
Requires instructor or evaluator verification of qualification. AQP allows completion of distributed training (e.g., home study) to be verified by an entry into XYZ's flight operations computer system. Upon successful completion of a computer-generated, random question exam, completion of the exam is logged electronically to each pilot's records. In this way, qualification on distributed training is verified automatically, rather than an instructor certifying crewmember completion of the training at the training center.

Part 121, section 121.419 (b)(2)
Specifies that initial ground training for pilots and flight engineers (FE) of Group II airplanes must be 120 programmed hours unless the FAA approves a reduction under section 121.405 guidance. XYZ' s AQP initial/transition curriculum includes all subjects listed in section 121.419(a), but for most airplanes is planned for less than 120 hours. Refer to the curriculum outlines in the Appendix for the specific hours planned for each curriculum in each fleet. The days of training and classroom hours planned for AQP are approximately the same number of days/hours in the currently approved part 121 programs, with principal operations inspector (POI) approval letter of hourly reduction under section 121.405.

Section 121.424
Refers to part 121, appendix E, for the maneuvers and procedures to be included in flight training, and part 121 appendix F for the maneuvers and procedures to be included in the flight check. The maneuvers and procedures for training and checking in XYZ' s AQP curricula are tailored for each airplane type and crew position and comply with the guidance in 14 CFR part 121 subpart Y, Advisory Circular (AC) 120-54A, and as approved by FAA for training and checking under AQP. Refer to the paragraph below titled section 121.441(b)(1) and appendices E and F for an explanation of the maneuver variances.

Section 121.427(c)(1)(iii)
Specifies that recurrent ground training for pilots and FEs on Group II airplanes must consist of at least 25.0 hours unless reduced under section 121.405. XYZ' s AQP continuing qualification (recurrent) ground training curriculum incorporates a total of 18.0 planned hours. This includes 5.0 hours of distributed training and 13.0 hours of self-study/classroom instruction in aircraft specific, human factors (HFS), general subjects, security, and emergency drill training. The enabling objectives (EO) to be trained and validated in the continuing qualification curriculum are presented in module format in accordance with FAA Order 8400.10, Air Transportation Operations Inspector's Handbook, and described in the objectives section of this document. The days of training and classroom hours planned

for AQP are approximately the same number of days/hours in the currently approved part 121 program, with POI approval letter of hourly reduction under part 121.405.

Section 121.433(a)
Specifies the crewmember must complete a training program approved under subpart N for the type airplane and crew position. XYZ' s flight crewmembers will complete the training program approved under part 121 subpart Y (AQP).

Section 121.433(c)(1)(iii)
Specifies a 6-month pilot-in-command (PIC) recurrent training requirement. XYZ will conduct annual recurrent training and checking under part 121 subpart Y full crew concept guidelines. Refer to the recurrent training curriculum outline in the appendix.

Section 121.433(c)(2)
Specifies that the proficiency check for pilots be as provided for under section 121.441. XYZ pilots in an AQP will complete the proficiency check as a line operational evaluation (LOE) under part 121 subpart Y full crew concept guidelines.

Section 121.434(g)(2)
References the section 121.441 proficiency check as the start of the 120 days for pilots to accomplish 100 hours of flight time for consolidation of knowledge and skills. In XYZ' s AQP, the start of the 120 days for completion of consolidation of knowledge and skills will be completion of the LOE.

Section 121.441(a)(1)
Specifies that the PIC accomplish a proficiency check within the preceding 12 months and in addition, within the preceding 6 months, either a proficiency check or an approved simulator course of training under section 121.409. In XYZ's AQP, PICs will be scheduled for an annual crew oriented training and check (LOE) within the required 12 months (plus or minus 1 month). However, the PIC requirement at 6 months for either a proficiency check or a simulator training session will be eliminated. Exception: PICs in certain situations will be required training at the 6-month point (plus or minus 1 month).

Section 121 Appendices E and F; and FAA Order 8400.10
Require an Air Transportation flight instructor to train pilots in the interior and exterior visual inspection. XYZ' s AQP allows the interior and exterior inspection (SPO 1.1.6.2 Aircraft Inspection) to be trained and validated by a ground instructor during the ground training segment of the qualification curriculum using advanced pictorials.

Section 121.441(b)(1) and Appendices E and F
Specifies that the proficiency check for pilots include at least the procedures and maneuvers in part 121 appendix F. All appendix E events are included in appendix F. In addition, appendix E includes the following six additional events not listed for the proficiency check in appendix F:

- Night takeoff and landings [II.(e) & IV.(i)];
- Zero flap approaches [III.(o), PIC only];
- Missed approaches that include a power plant failure [III.(p)(4)];
- Landing and go around with the horizontal stabilizer out of trim [IV.(b), PIC only];
- Zero flap landings if the Administrator finds that event appropriate [IV.(h), PIC only];
- Manual reversion (if appropriate) [IV(i)].

In accordance with part 121 subpart Y and AC 120-54A, the events to be trained and validated/evaluated in XYZ's AQP are the terminal proficiency objectives (TPO) and supporting proficiency objectives (SPO) described in the Proficiency Objectives section of this document. While occasionally labeled differently, these TPOs and SPOs are very similar to the events listed in appendices E and F, and all appendix E and F events are included, except steep turns and circling approaches. Circling approaches are not authorized in XYZ' s operations and are not included in the curriculum. Refer to the Training & Evaluation Strategy section of this document for more information on training and evaluation procedures.

Section 121, Appendix H, paragraph 6 under Advanced Simulation Training Program
Specifies that a special line oriented flight training (LOFT) program is required, consisting of at least a 4-hour course of training for each flightcrew, including at least two flight segments of the operator's route: one segment of normal operating procedures and another segment in appropriate abnormal and emergency flight operations. XYZ' s AQP is structured to comply with the guidance contained in part 121 subpart Y and AC 120-54A. As such, training, validation, and evaluation are conducted with a complete crew using the concepts of LOS. While XYZ' s AQP does not currently include a LOFT, it does include special purpose operational training (SPOT) sessions and incorporates an LOE as the final performance evaluation to confirm operational proficiency. In all respects, the LOE resembles the traditional LOFT scenarios currently used in the approved advanced simulation training program.

Maneuvers	Part 121 Appendix E Air Carrier Training	Practical Test Standards FAA-S-8081-5C	Part 121 Appendix F Proficiency Check	AQP Qualification Curriculum	AQP Continuing Qualification Curriculum
Preflight					
Equipment Examination	N/A	Required (Page 1-1)	Required	Written/ETS/Oral	Written/ETS/Oral
Interior Preflight Inspection	Required	Required (Page 2-1)	Required	MV/LOE	Line check
Exterior Preflight Inspection	Required	Required (Page 2-1)	Required	MV/LOE	Line check
Taxiing	Required	Required (Page 2-3)	Required	MV/LOE	Line check
Powerplant Checks	Required	Required (Page 2-3)	Required	MV/LOE	Line check
Takeoffs					
Normal Takeoffs	Required	Required (Page 2-5)	Required	MV/LOE	Line check
Instrument Takeoff	Required	Required (Page 2-6)	Required	MV/LOE	MV/LOE
Crosswind Takeoff	Required	Required (Page 2-5)	Required	MV/LOE	Line check
Takeoff with Powerplant Failure	Required	Required (Page 2-7)	Required	MV/LOE	MV/LOE
Rejected Takeoff	Required	Required (Page 2-8)	Required	MV/LOE	MV/LOE
Instrument Procedures					
Area Departure and Arrival	Required	Required [Waivable] (Pages 2-9; 2-15)	Required [1Waivable]	MV/LOE	Line check
Holding	Required	Required [Waivable] (Page 2-16)	Required [Waivable]	MV/LOE	Brief
Normal ILS	Required	Required (Pages 2-16; 2-17)	Required	MV/LOE	MV/LOE
Autopilot Coupled ILS	Required	Not Required (Pages 2-16; 2-17)	Required	Train to Proficiency	MV/LOE
Manually Controlled ILS with Powerplant Failure	Required	Required (Pages 2-16; 2-17)	Required	MV/LOE	MV/LOE
Non-Precision Approach	Required	Required (Pages 2-18; 2-20)	Required	MV/LOE	MV/LOE
Second Non-precision Approach	Required	Required [Waivable] (Pages 2-18; 2-20)	Required	Train to Proficiency	Train to Proficiency
Circling Approach	Not Required	Required [Waivable] (Page 2-20) Note 5	Required [Waivable]	Train to Proficiency	Brief
Missed Approach from ILS	Required	Required (Pages 2-21; 2-22)	Required	MV/LOE	MV/LOE
Additional Missed Approach	Required	Required (Pages 2-21; 2-22)	Required	Train to Proficiency	N/A
Missed Approach with Powerplant Failure	Required	Required (Pages 2-21; 2-22)	Examiner Discretion	MV/LOE	MV/LOE

Inflight Maneuvers					
Steep Turns	Not Required	Required [Waivable] (Page 2-10)	Required	Train to Proficiency	N/A
Approach to Stalls	Not Required	Required [2 of 3 Waivable] (Pages 2-10; 2-11)	Required [2 Waivable]	Train to Proficiency	Train to Proficiency
Flight Characteristics	As Necessary	As Necessary	As Necessary	Train to Proficiency	N/A
Powerplant Failures	Required	Required (Page 2-12)	Required	MV/LOE	MV/LOE
Abnormal and Emergency Procedures will include all systems maneuvers and procedures as required by Aircraft Flight Manual	Required	Required (Pages 2-29; 2-30)	Required	A sampling of Abnormals and Emergencies will trained in the simulator and evaluated during MV and LOE.	Abnormals and Emergencies will be evaluated during ground school, trained in the simulator and evaluated during MV and LOE.
Landings					
Normal Landings	Required	Required (Page 2-23)	Required	MV/LOE	Line Check
Landing from an ILS	Required	Required (Page 2-24)	Required	MV/LOE	MV/LOE
Crosswind Landing	Required	Required (Page 2-23)	Required	MV/LOE	MV/LOE
Landing with Powerplant Failure	Required	Required (Page 2-25)	Required	MV/LOE	MV/LOE
Landing from a Circling Approach	Required	Required (Page 2-26)	Required	Train to Proficiency	N/A
Rejected Landing	Required	Required (Page 2-27)	Required	MV/LOE	MV/LOE
Zero Flap Landing	Required	Required (Page 2-28)	Required	N/A	N/A
Postflight					
After Landing	Required	Required (Page 2-31)	Required	Line Check	Line Check
Parking and Security	Required	Required (Page 2-31)	Required	Line Check	Line Check
Training					
Windshear/Microburst				Train to Proficiency	Train to Proficiency
GPWS				Train to Proficiency	Train to Proficiency
Low Vis Taxi				Train to Proficiency	Train to Proficiency
PRM				Train to Proficiency	Train to Proficiency
Upsets/Catastrophic Failures				Train to Proficiency	Train to Proficiency

APPENDIX 4.
ADVANCED QUALIFICATION PROGRAM DOCUMENTATION CHECKLIST AND REVIEW JOB AID

This Advanced Qualification Program (AQP) tool contains seven job aids for both the Federal Aviation Administration (FAA) and the certificate holder to use as simplified checklists for the development and review of the documentation requirements of AQP. Other document configurations may be appropriate to a specific certificate holder. If a certificate holder adopts a different document configuration, other than the one suggested in Advisory Circular (AC) 120-54A, Advanced Qualification Program, then the applicant should provide clear and specific guidance as to the location of the information for each of these document topics. The comment section may be used to record any remarks relative to the review and approval of the document.

There are six document types and one annual report required for each AQP certificate holder. Each document will have its own job aid:

1. Application -- One per AQP airline/training center
2. Job Task Analysis – One for each trainee type and one for each trainee type's instructor/evaluators
3. Qualification Standards -- One for each trainee type (e.g., pilot, flight attendant, and dispatcher) and one for each trainee type's instructor/evaluators
4. Instructional Systems Development Methodology -- One per AQP airline/training center
5. Curriculum Outline -- One per curriculum/make, model, series, variant and instructor/evaluator
6. Implementation and Operations Plan (I&O Plan) -- One per AQP airline/training center.

NOTE: Each of the above documents must remain current throughout the life of the AQP. Each of the documents must be on a revision control process.

Annual AQP Report – Certificate holders will monitor the status of all AQP curriculums and the performance/proficiency Database and will summarize their findings annually in a report to the FAA. Although there is no established format for the report, the associated job aid can be used to highlight areas to be addressed in the report.

Application, Phase I -- AC 120-54A. The purpose of the application is to establish the applicant's methodology for developing an AQP for all of its fleets, instructors and evaluators, and for non-fleet specific curriculum (i.e., indoctrination). The application is submitted once and is updated as information in the application changes (e.g., a change in the transition schedule, adding new aircraft, initiating flight attendant or dispatcher AQP programs, etc.). In order to establish the applicant's intent and approach for developing an AQP, the application should thoroughly discuss the following topics numbered 1 – 9 in this job aid.

NOTE: An application boilerplate is available from AFS-230.

1	**Statement of Intent.**	Y	N	Comments
	a. Does the Statement of Intent specify the applicant's intent to develop, implement, and operate an AQP?			
	b. Does the Statement of Intent address all fleets?			
	c. Does the Statement of Intent address how and to what extent the AQP will be operated and maintained?			
	d. Does the Statement of Intent address how CRM will be integrated and measured?			
	e. Does the Statement of Intent include the use of the single visit exemption or that single visit will not be used?			
2	**The Applicant's Staff Organization.**	**Y**	**N**	**Comments**
	a. AQP Coordination: Is a person identified that will be the focal point for the applicant's AQP development and contact with the FAA?			
	b. Subject Matter Expertise (SME): Are current and qualified individuals identified by name or position, who have varying levels of expertise that fairly represent the population of professionals the AQP will address?			
	c. Document and Curriculum Development: Are individual(s) identified by name or position, who interface with the AQP coordinator and the SMEs to develop the requisite AQP process, curriculum, and instructor/evaluator documents?			
	d. Document Management: Is an individual identified, who ensures AQP document control and congruence with FAA approvals?			
	e. Computer Specialist/Database Management: Is an individual identified who will develop and manage the performance/proficiency data acquisition and analysis system?			
	f. In addition, will the computer specialist/database manager be used for other computer-related issues related to the facilitation of an AQP, such as electronic document review?			

3	**Data Collection, Submission and Analysis Reporting**	**Y**	**N**	**Comments**
	a. Does the applicant acknowledge their understanding and acceptance of the AQP performance data requirements by stating the intended purpose for the collection, management, analysis, and reporting of AQP training/evaluation data for each curriculum?			
	b. Does the applicant defer to the I&O plan for describing the process and methodology for AQP data collection and analysis?			
	c. Does the applicant acknowledge that an electronic data management system will be developed prior to entering phase III of any AQP curriculum?			
	d. Does the applicant acknowledge the requirement for collecting SVTP data?			
	e. Does the applicant acknowledge that requirement for submitting de-identified data to the FAA no later than 2 months after collecting the data?			
	f. Does the applicant acknowledge the requirement of a more stringent collection and analysis of the data than that submitted to the FAA?			
	g. Does the applicant describe the purpose of the data analysis and how it will be used?			
	h. Does the applicant acknowledge the requirement for submitting an annual AQP report summarizing their data analysis and any resulting changes that ensued in their AQP program?			
4	**Supporting Documents and Manuals**	**Y**	**N**	**Comments**
	a. Do the supporting documents and manuals list each make, model, and series aircraft or variant?			
	b. Has the applicant provided the FAA (CHDO) with the following documents or manuals:			
	1. A current listing of company and manufacturers manuals that governs company operations?			
	2. General descriptive summary of each aircraft type, including aircraft configuration and the performance baseline?			
	3. Flight Operations Manual (FOM)?			
	4. General Operations Manual (GOM)?			
	5. Manufacturer's Aircraft Flight Manual (AFM)?			
	6. Master Equipment List (MEL/CDL)?			

		Y	N	Comments
	c. Does the applicant have available the training and qualification recommendations in the Flight Standards Board reports?			
5	**Operating Environment Description**	**Y**	**N**	**Comments**
	a. Does the applicant describe the operating environment, including the general meteorological and geographic factors expected to be encountered during operations?			
	b. Does this description include the weather norms and extremes expected to be encountered in operations?			
	c. Does this description include normal, abnormal, and emergency equipment operation in geographic areas that require special procedures (e.g., engine failures in mountainous terrain)?			
	d. Does this description include terminal and en route operating areas such as controlled and uncontrolled airfields?			
6	**Trainee Demographics**	**Y**	**N**	**Comments**
	a. Does the applicant provide a general summary of trainee experience and entry level by aircraft make, model, series or variant?			
	b. Does the applicant identify entry requirements for ground and flight instructors and evaluators?			
	c. Does the applicant group students in terms of previous experience (e.g. with high, low, and mean experience included)?			
	d. Does the applicant identify the current and anticipated need for replacement crewmembers by duty position? This information is necessary to determine priority on curriculum development?			
7	**Training Equipment – Description and Location**	**Y**	**N**	**Comments**
	a. Does the applicant identify the training equipment to be used, its location, and identify the organization (vendor or applicant) responsible for its security and maintenance?			
	b. Does the applicant identify flight simulators and/or flight-training devices by make, model, serial number, and/or FAA identification number assigned by the National Simulator Program Manager?			

8	Facilities Description	Y	N	Comments
	a. Does the applicant describe the location, general type of facility, classrooms, training aids, course software, and other resources to be used to support AQP training?			
9	**Master AQP Transition Schedule (MATS)**	**Y**	**N**	**Comments**
	a. Does the MATS include all aircraft, aircrew, instructors, evaluators, and other personnel that the applicant intends to transition to AQP?			
	b. Is the MATS complete? A partial MATS is not acceptable.			
	c. Does the MATS address how currently qualified personnel may transition between traditional recurrent training & continuing qualification curriculums or single visit training?			A simple spreadsheet, provided by the applicant, may be helpful to highlight the crew pairing requirements during the first year of AQP or Single Visit operations.
	d. Does the MATS address how personnel who have completed initial, transition or upgrade curricula may enter a continuing qualification curriculum?			
	e. Does the MATS address personnel who have completed a traditional basic indoctrination curriculum, but have not completed an initial, transition or upgrade curriculum?			
	f. Does the MATS address personnel who are current instructors or evaluators and how they may transition to AQP via a differences course?			
	g. Does the MATS address the incremental implementation of the curriculums as opposed to all at once?			

Job Task Analysis (JTA), Phase II -- AC 120-54A. A JTA is the method or procedure used to reduce a unit of work to its base components. The JTA provides a detailed, sequential listing of tasks, subtasks, and elements with the knowledge, skill, and attitude characteristics (KSAs) that clearly define and completely describe the job. An applicant will provide a JTA for each make, model, and series aircraft (or variant). These may be submitted as individual listings, or a single-higher level listing with appendices for each aircraft, showing its unique lower-level features. As a complete document, the JTA has four components: a job task list, a learning analysis (KSA), identified crew positions, and references.

1	**JTA Structure**	**Y**	**N**	**Comments**
	a. Does the JTA provide a general introduction explaining the development of the task listing and the subsequent task analysis and how it is to be used to form the basis for the qualification standards, and the AQP curriculums upon which they are built?			
	b. Is the JTA organized using a hierarchical system with the flight phases at the top level, tasks at the next level, component subtasks at the next level, elements at the next level?			
	c. Is the JTA complete with tasks, subtasks, elements, and crew positions?			
	d. Has the applicant completed full development of the JTA to the element level?			
	e. In the JTA applicable knowledge, skills, CRM markers, and (where desired) attitudes are applied at the element level?			
2	**Flightcrew Training Requirements**	**Y**	**N**	**Comments**
	Does the JTA incorporate all knowledge and skill requirements currently specified in the regulations?			
	a. Aircraft Systems' Subjects			
	Aircraft General			
	Equipment and Furnishings			
	Emergency Equipment			
	Powerplants			
	Electrical			
	Pneumatic			
	Air-conditioning and Pressurization			
	APU			
	Hydraulics			
	Landing Gear and Brakes			
	Flight Controls			
	Fuel			
	Communications Equipment			
	Flight Instruments			
	Navigation Equipment			
	Autoflight			
	Warning and Detection Systems (to include TCAS, GPWS, and WX Radar			

		Y	N	Comments
	Fire and Overheat Protection			
	Oxygen			
	Aircraft Performance & Limitations			
	MEL/CDL			
	b. System-Operations Integration Training	**Y**	**N**	**Comments**
	Preflight Visual Inspection			
	Prestart Checklist and Procedures			
	Powerplant Start			
	Taxi to include lowest visibility allowed by OPSPECS			
	Pre-Takeoff Checks and Procedures			
	Normal Takeoff			
	Crosswind Takeoff			
	Instrument Takeoff (Low Visibility)			
	Powerplant Failure on Takeoff (at or near V1)			
	Powerplant Failure After V2			
	Rejected Takeoff			
	Area Departure			
	Cruise Procedures			
	Holding			
	Area Arrival			
	Normal ILS			
	Engine-out ILS			
	Autopilot-Coupled ILS			
	Non-precision Approach			
	ILS missed Approach			
	Second Missed Approach			
	Precision Radar Monitored Approaches/Missed			
	Circling Approach			
	No-flap Landing			
	Crosswind Landing			
	Landing With Engine Out			
	Landing From Circling Approach			
	Rejected Landing			
	Landing With 50% Power Loss			
	Approaches to Stalls			
	Steep Turns			
	Powerplant Failure			
	Windshear Training			
	Mis-Trim Situations			
	Selected Events - Unusual Attitudes			
	TCAS and GPWS -Escape			
	Normal and Abnormal Procedures			
	Emergency Procedures			

	c. Company Operations Manual Content	Y	N	Comments
	Company Policy or Procedures (dispatch and flight release requirements)			
	Regulations, Operations Specifications, and Standards Operating Procedures (SOP)			
	Weather Requirements (seasonal changes, flight into various geographic locations and temperature-related requirements)			
	Hazardous Material			
	Security			
	Special Operations (special airports, special approaches and departures)			
	Emergency crew assigned duties and procedures			
	Operation of emergency equipment/systems			
	Operation of ditching/evacuation equipment/systems			
	Crew Resource Management (CRM)			
	Emergency Situation Training – Rapid Decompression, Fire (Flight/Surface), and smoke control procedures			
	Assistance of Persons to Exits during Emergency			
	Illness, Injury, or Other Abnormal Situations Involving Passengers or Crew (use of medical kit)			
	Flight Physiology (i.e., Hypoxia, Respiration, etc.)			
	Use of Checklist (SOP)			
	Cockpit Familiarization			
	Preflight Planning and FMS			
	In-flight Planning L-Nav, V-Nav, R-Nav, and GPS			
	Required Navigation Procedures			
	Navigation Systems Integration			
	Autoflight and Flight Director Integration			
	Use of Radar/CRTs			
	TCAS			
	GPWS/TAWS			
	Communication Systems Integration (ACARS/FMS/CPDLC)			
	Surface Movement Guidance Systems (SMGS)			
	Runway Incursion Prevention Strategy			
	Stabilized Approach Strategy			
	Precision Radar Monitoring (PRM) Procedures			
	Land and Hold Short (LAHSO) Procedures			
	CAT II/III			

Qualification Standards (QS), Phase II -- AC 120-54A. The qualification standards document has four parts, the prologue, a regulatory comparison, the evaluation/remediation methodology, and the specific terminal proficiency objectives (TPO)/supporting proficiency objectives (SPO) qualification standard.

1. Prologue: This is an introductory section that explains the methodology, format, and terminology of the document.

2. Regulatory Requirements Comparison: The qualification standards document must also include regulatory comparison information. The comparison must meet the requirement of AQP regulatory guidance, which states that the AQP program "...must indicate specifically the requirements of 14 CFR parts 61, 63, 65, 121 or 135, as applicable, that would be replaced by an AQP curriculum." The comparison should be comprehensive and understandable so that a reader can discern the scope and appropriateness of the training.

3. Testing/Validation/Evaluation and Remediation Methodology: This section is a detailed plan describing the point in the curriculum when a test, validation, or evaluation will be applied. It must identify what constitutes a failure and/or unsatisfactory performance. This section will also describe the remediation strategy to be used to correct unsatisfactory performance and special tracking provisions.

4. The Qualification Standard: The qualification standard is constructed by applying a performance statement, conditions, and standards to a task or subtask, thereby creating a TPO or an SPO.

1	**Qualification Standards Prologue**	**Y**	**N**	**Comments**
	a. Does the prologue discuss the methodology used to develop the qualification standards document?			
	b. Does the methodology explain how any aspect, from curriculum outline to lesson elements or grade sheet items, is be traceable to an item in the qualification standard?			
	c. Does the prologue discuss the format (structure) that used for the qualifications standards?			
	d. Does the prologue define terms used for the qualification standards?			
2	**Regulatory Comparison**	**Y**	**N**	**Comments**
	a. Does the regulatory comparison specify the requirements of the applicable practical test standards and part 61, 63, 65, 121, or 135 that would be replaced by an AQP curriculum and how they will be addressed?			
	b. Are departures from those requirements identified and justified?			
	c. Are any standards specifications used that differ from practical test standards (FAA-S-8081)?			

3	Testing/Validation/Evaluation & Remediation Methodology	Y	N	Comments
	a. Does the applicant describe where to ascertain how, when, where, and who will assess a student's proficiency on each terminal and supporting objective?			
	b. Does this section identify the points in the curriculum where the testing, validation, or evaluation will be applied?			
	Systems Validation			
	Procedures Validation			
	Maneuvers Validation			
	LOE			
	Line Checks			
	c. Does the applicant clearly define the different strategies that will be used to test, validate, or evaluate performance?			
	First Look			
	Train To Proficiency			
	Systems/Knowledge Validation			
	Procedures Validation			
	Maneuvers Validation			
	Line Operational Evaluation			
	Initial line Check			
	Line Check			
	d. Does this section describe how the criticality and currency ratings translate into testing strategies for TPOs and SPOs in the continuing qualification cycle?			
	e. Does this section describe how a TPO with several SPOs may be alternatively sampled over multiple evaluation periods or continuing qualification cycles? e.g., TPO (non-Precision Approaches) SPOs (NDB, VOR, BC, etc.)			
	f. Does the applicant specify and clearly describe the rating scale that will be used by instructors/evaluators to score performance?			
	g. Do the rating scale definitions clearly discriminate performance levels? Are they clear?			
	h. Does the applicant identify what constitutes a failure and/or unsatisfactory performance for each validation/evaluation point?			
	i. Does the applicant specify the strategy for remedying unsatisfactory performance?			
	j. Does this remediation strategy detail when and what may be repeated and whether or not additional training is warranted?			
	k. Does the applicant describe the methodology that will be used to remediate unsuccessful testing, validation, or evaluation sessions?			

		Y	N	Comments
	l. Does the applicant describe the level of training devices, simulators, or aircraft to be used to evaluate the proficiency objective at each point in the curriculum?			
	m. Does the remediation strategy specify when no more training will be offered to the individual and the resulting actions such as "Referred to Director of Training," "returned to previous position," etc.			
	n. Does the remediation strategy describe the criteria for placing an individual on special tracking?			
	o. Does the remediation strategy describe the strategy that will be used for an individual on special tracking?			
	p. Does the remediation strategy describe what must take place for an individual to be removed from special tracking?			
4	**Qualification Standards**	**Y**	**N**	**Comments**
	a. Does each individual qualification standard contain the following:			
	A header identifying the airline and the document?			
	Page revision control dates and revision numbers?			
	Consecutive page numbers?			
	Phase of Operations: Number and title from task listing?			
	Qualification Standard Title: Either TPOs or SPOs?			
	Task or Subtask: Number and title from task listing?			
	Crew duty positions?			
	Criticality/Currency Rating: From the task factors analysis?			
	Curriculum: This field identifies the curriculum(s) in which the task will be trained and evaluated.			
	Evaluation Strategy: The evaluation point for this particular qualification standard: e.g., train to proficiency, procedures validation, maneuvers validation, LOE, or line check?			
	Media: The specific media in which training and/or evaluation will be conducted. For qualification, the media is the lowest media used for final evaluation. For continuing qualification, the media is the range of media used for training.			

		Y	N	Comments
	Performance Statement: An expanded statement of expected behavior, which, when executed, will complete the work required for a specific portion of a job?			
	Conditions operational and environmental? Are the specific conditions to be used for the qualification curriculum specified?			
	Contingencies. Are the specific contingencies to be used for the qualification curriculum specified?			
	Maneuver Standards: Are they specific and do they correspond to the standards listed in the practical test standards?			
	Procedural Standards: They may be specific or general. If they are specific, do they correspond to the standards listed in the manuals listed in the reference block? If general, do they reference information in a document or manual to chapter or section (page numbers are not required)?			
	References: Identify the primary references from which performance statements and associated standards were derived. Cite documents by title and where applicable, chapter or section. Page numbers are not required.			
	Are there any operations specifications requirements other than those listed above?			

The Instructional Systems Development Methodology document describes the approach to be used by applicant airlines to develop and maintain all Advanced Qualification Program (AQP) curriculums. This document is divided into two sections. The first section, Development Procedures, describes the applicant's approach for using the Job Task Analyses and Qualification Standards as baseline documents to construct their general training curriculums across all AQP courses. The second section, Line Operational Simulation Methodology, describes the approach for developing line operational simulation (LOS) scenarios.

1	**Development Procedures**	**Y**	**N**	**Comments**
	a. Is the procedure for allocating TPOs and SPOs to lessons, selecting media and methods, and developing the curriculums described?			
	b. Does the applicant describe how enabling objectives (EO) are developed to support their higher level objectives?			
	c. Does the applicant describe how learning and evaluation activities are developed to support these objectives?			
	d. Does the applicant describe how instructional media and methods to are assigned to objectives?			
	e. Does the applicant describe how objectives are clustered and sequenced into lessons, modules, segments, and curriculums?			
	f. Does the applicant describe how an audit trail will be maintained to link proficiency objectives, lesson activities/content, and test items?			
2	**Line Operational Simulation (LOS) Methodology**	**Y**	**N**	**Comments**
	a. Does the applicant describe how the typical scenario is constructed?			
	b. Does the applicant describe how each event set relates to a phase of operation?			
	c. Does the applicant describe how each event set consists of a series of proficiency objectives that include both technical and CRM activities?			
	d. Does the applicant describe the use of event conditions, triggers, and distracters, as well as supporting events?			
	e. Does the applicant identify possible sources of incidents that will elicit the behavior required by the proficiency objectives selected for the scenario?			
	f. Does the applicant define the basic success criteria for the LOS, and each event set within it?			
	g. Does the applicant describe the scenario development process?			
	Drafting - who will do the work?			
	Use of gradesheets?			
	Testing - who will be involved?			

	Training instructors/evaluators to administer LOS scenario?			

The curriculum outline is a listing of course content. It should be arranged from curriculum into segments, segments into modules, modules into lessons, and lessons into elements. Each part of the curriculum outline must clearly indicate the subject matter to be taught and correspond directly to the hierarchical system of the task analysis. A curriculum outline provides the basis for the curriculum footprint, which is a high level graphical overview of the curriculum content depicting the training and evaluation activities and the proposed hours for each day of the curriculum.

1	Curriculum Outline	Y	N	Comments
	a. Does the certificate holder have indoctrination, qualification, and continuing qualification curriculums for each duty position in each make, model, and series/variant aircraft?			
	b. Does the certificate holder have separate indoctrination, qualification, and continuing qualification curriculums for the instructors and evaluators?			
	c. Does the certificate holder have any special curriculums (transition, upgrade, requalification or refresher)?			
	d. Is each curriculum constructed in the following order: curriculum, segment, module, lesson, and lesson element?			
	e. Does the curriculum outline provide a level of detail that will allow the AQP applicant to make changes to the syllabus without submitting a new document for each syllabus change?			
	f. Does the curriculum outline include:			
	Operator's Name?			
	Type of Aircraft?			
	Duty Position(s)?			
	Title of curriculum and/or curriculum segment?			
	A listing of numbered (coded) objectives organized into lessons, modules, and segments?			Numbers (codes) must allow AFS-230 to track objectives back to qualification standards and Job Task Analysis
	An outline of each training module within each curriculum segment?			Each module should contain sufficient detail to ensure that the main features of the principal elements or events will be addressed during instruction.
	The checking and qualification modules of the qualification curriculum segment used to determine successful course completion, including any regulation qualification requirements for crewmembers to serve in part 121 or part 135 operations (such as initial operating experience, line checks, operating familiarization)?			
	g. Does the curriculum outline indicate that it is part of the revision control system by page format?			

	h. Do the curriculum outlines provide a hierarchical link (proficiency objectives) between the qualification standards and a curriculum?			
		Y	**N**	**Comments**
	i. Does each part of the curriculum outline clearly indicate the subject matter to be taught and correspond directly to the hierarchical numbering system of the task analysis?			
2	**Curriculum Footprint**	**Y**	**N**	**Comments**
	a. Does the curriculum footprint describe the training and evaluation activities conducted each day of the curriculum?			
	b. Does the curriculum footprint include the planned hours?			

Implementation and Operations Plan (I&O Plan). This document is a milestone schedule detailing the transition to an AQP for crewmembers, dispatchers, instructors, evaluators, and other operations personnel and a blueprint describing provisions for maintenance, administration, data management, and continuing quality control of curriculums. The I&O Plan can be sectioned into two parts. The first part spells out how the operator proposes to implement the AQP. Included in this proposal is the schedule for the phase III training evaluation to include instructor/evaluator training and small group tryouts. It should also include provisos for evaluating the effectiveness of performance measurement tools, and provisions for evaluating facilities, courseware, and equipment before starting the plans for the small group tryouts. The second part explains how the certificate holder intends to operate the AQP in phases IV and V. Included in this section are strategies for maintaining the program, crew pairing policy, first-look administration, and instructor/evaluator requirements. The operations plan should also describe in detail the data management plan. This plan includes a statement of understanding addressing the collection and analysis of performance/proficiency data and a description of the performance proficiency database (PPDB), the data management collection process, and the FAA data submission, analysis, and reporting requirements.

1	**Implementation – Phase III**	**Y**	**N**	**Comments**
	a. Does this section include schedules for the implementation of the each of the AQP curriculums?			
	b. Do the schedules correlate to the MATS?			
	c. Do the schedules include dates for training the instructor/evaluators?			
	d. Does the instructor/evaluator training include difference training for those previously qualified (if applicable)?			
	e. Does this section include provisions for evaluating facilities, courseware, and equipment before starting the phase III training?			
	f. Does this section describe a plan for evaluating and observing the instructors and evaluators during the phase III small group tryout?			
	g. Does the instructor/evaluator training include provisions for evaluating the effectiveness performance measurements such as the application of the rating scale, use of grade sheets and student feedback?			
	h. Does this section indicate that the applicant will request no-jeopardy credit for the small group tryout course graduates in a separate letter addressed to the FAA Manager of Voluntary Safety Programs and the POI?			
2	**Operations Phases IV and V – AQP Maintenance**	**Y**	**N**	**Comments**
	a. Does this section describe the methodology for maintaining control of the AQP approval documents?			
	b. Does this methodology include a procedure for providing document copies to the POI and the FAA Manager of Voluntary Safety Programs after the receiving the approval stamp from the POI?			

		Y	N	Comments
	c. Does this section describe the strategy to be employed for curriculum maintenance and update?			
	d. Does the strategy for curriculum maintenance and update include plans for acquiring and measuring data for tracking curricula?			
	e. Does the strategy for curriculum maintenance and update identify the person(s) responsible making changes in the AQP?			
	f. Does this section describe the strategy for monitoring and responding to demographic changes?			
	g. Does this section describe using training and evaluation feedback to maintain and improve the AQP?			
	h. Does this section describe how student and instructor feedback will be obtained?			
	i. Does this section describe any plans to upgrade training equipment?			
3	**Operations Phases IV and V – First-Look Maneuvers Administration**	**Y**	**N**	**Comments**
	a. Does the applicant define first-look maneuvers, their purpose, and the strategy that will be used to administer them?			
	b. Does this strategy indicate who will administer the first-look maneuvers and at what point in the curriculum?			
	c. Does this strategy state that first-look will not be briefed prior to the first execution of these items?			
	d. Does this section describe how first-look maneuvers are selected?			
	e. Does this section describe how the first-look maneuvers would be updated?			
	f. Does the applicant describe how first-look maneuvers will be analyzed to determine trends of degraded proficiency?			
4	**Operations Phases IV and V – LOFT/LOE Crew Scheduling and Pairing Policy**	**Y**	**N**	**Comments**
	a. Does this section describe the circumstances that would require a seat substitute?			
	b. Does this section describe the decision rules that would apply in obtaining a seat substitute?			
	c. Does the decision rules that would apply in obtaining a seat substitute ensure that in all cases, the seat substitute must be task familiar with the duty position?			

		Y	N	Comments
	d. Does this section describe at what point in the curriculum that a seat substitute would be used?			
	e. Does the applicant acknowledge that all occurrences of seat position substitution including the qualification of the seat substitute must be reported?			
5	**Operations Phases IV and V – Instructor/Evaluator Requirements**	**Y**	**N**	**Comments**
	a. Does the applicant identify by title each instructor or evaluator position?			
	b. Does the applicant describe the job function(s) that each instructor or evaluator is authorized to perform?			
6	**Data Plan**	**Y**	**N**	**Comments**
	a. Does the data plan have a prologue that establishes the intended purpose and methods for the collection, management, analysis, and reporting of AQP training/evaluation data for each curriculum?			
	b. Does the prologue specify how the data plan will be maintained and updated?			
	c. Does the prologue acknowledge the airline's responsibility to collect and analyze more data than is required to be submitted to the FAA in order to adequately identify performance trends and make changes to factors that impact the crewmember performance?			
	d. Does the data plan address the methods (e.g., gradesheets, computer-input screens, etc.) used to collect performance/proficiency data for all curriculums?			
	e. Does the data plan address data input quality control, security, and usability?			
	f. Does the data plan address data management as the means and strategy the AQP airline intends to employ to store, access, and assimilate the AQP/SVTP performance/proficiency data that is collected?			
	g. Does the data plan address the type of software the data management system employs (e.g., relational database, spreadsheet etc.), the organization of the information in the electronic medium (e.g., database definition, database table relationships, spreadsheet description, etc.) and a description of the user interface to this data management system?			

		Y	N	Comments
	h. Does the data plan address the type of analysis it will employ to facilitate the AQP performance information needs of the airline and the FAA? This discussion of the data analysis must address how each type of AQP data will be analyzed.			
	i. Does the data plan address the FAA data submission requirements including format and frequency?			
	j. Does the data plan address the type of data format it will employ for the reports, (e.g., tabular reports, graphs)?			
	k. Does the data plan address the frequency of the reports, both internal and FAA?			
	l. Does the data plan identify the internal airline personnel that will receive the reports?			
	m. Does the data plan include copies of all forms used for data acquisition and grading?			
	n. Does the data plan include a database description of data field types and a graphical depiction of the Database table relationships?			
	o. Does the data plan address a quality assurance strategy for ensuring data integrity? Does this strategy include instructor and evaluator grading calibration?			

Annual AQP Report – Phases IV & V. AQP requires that each AQP certificate prepare an annual AQP report for the FAA. This report is based on the certificate holder's analysis of the data that is collected during training and at strategic points (validation/evaluation gates) in each curriculum and maintained in the proficiency/performance database (PPDB). AQP requires data collection and analysis in order to establish and maintain quality control of curricula for crewmembers, instructors, and evaluators. The annual AQP report should summarize the lessons learned and adjustments made to the curriculum(s) during the reporting period. The report should also include projected or proposed changes to the curriculum(s) based on the certificate holder's current analysis. The actual adjustments made to the AQP are reflected in revisions to the approved AQP documents. The report should be submitted to the FAA no later than 60 days past the end of the report period. The reporting period is usually based on the approval date for a particular curriculum in either phase IV or V. During AQP development, particularly for multiple fleet operators, with different approval dates for multiple curriculums, the reporting period may be modifiable as agreed upon by the FAA and the certificate holder. Copies of the report should be distributed the principal operations inspector (POI) and AFS-230 at least 2 weeks prior to the annual AQP review meeting.

	Annual AQP Report	Y	N	Comments
	a. Is there a prologue or introduction to the report that addresses how each type of AQP data was analyzed? This prologue should corroborate the information in the I&O Plan.			
	b. Does the report discuss data reliability and consistency?			
	c. Does the report summarize the internal quality assurance reports as addressed in the I&O Plan?			
	d. Does the report validate the effectiveness of the AQP with supporting evidence of successful training and evaluation?			
	e. Is the report supported by the FAA analysis of the submitted data?			
	f. Does the report identify any trends, problem areas, and potential deficiencies that could result in decreased proficiency?			
	g. Does the report include a description of corrective measures taken and any resulting changes to curriculums?			
	h. Does the report include any projected corrective measures to be taken and provide rationale for these changes?			
	i. Does the report indicate a need for changes to the AQP maintenance strategy as described in the I&O Plan?			
	j. Does the report indicate a need for changes to the certificate holders data plan as described in the I&O Plan?			
	k. Does the report provide an analytical comparison of data between equivalent periods in preceding years?			
	l. Does the report identify any future operational changes that will affect the AQP (operational changes or trainee demographics)?			

		Y	N	Comments
	m. Does the report analyze training and evaluation feedback as part of the collected data to determine the effectiveness of the training program?			
	n. Does the report analyze on-time completion rates for training curriculums and initial operating experience?			
	o. Does the report analyze special tracking rates?			
	p. Does the report analyze instructor/evaluator (I/E) rater reliability training results?			
	q. Does the report analyze instructor comments as part of the collected data to determine the effectiveness of the training program?			
	r. Does the report analyze first look data?			
	s. Does the report analyze maneuvers data?			
	t. Does the report analyze LOE data by technical topics, and CRM elements?			
	u. Does the report analyze Line check data (exclusive of initial OE)?			
	v. Does the report address progress towards phases III, IV, & V in other fleets (as applicable)?			
	w. Does the report address seat substitution rates?			
	x. Does the report address recordkeeping?			
	y. Does the report address adherence to the I&O Plan?			
	z. Does the report address the validity and usefulness of the qualification standards?			
	aa. Does the report address internal audit or FAA surveillance findings?			
	bb. Does the report address related safety programs (i.e., FOQA/ASAP)?			

APPENDIX 5.
ADVANCED QUALIFICATION PROGRAM QUALIFICATION STANDARDS DOCUMENTATION

This is the section of the Job Task Analysis that serves as the foundation document for the sample qualification standards that follow. Task 6.1 serves as the basis for the terminal proficiency objective (TPO)-level qualification standard while subtasks 6.1.1 and 6.1.2 serve as the foundation for the supporting proficiency objective (SPO)-level qualification standards.

Generic Airlines Inc Operations Manual Volume 9

Chapter 3: Qualification Standards, B-767 Flightcrew

Rev. # Original Dated 06/15/05

6. Approach Operations and Landing
    - 6.1 Perform an Instrument Approach*
        - 6.1.1 Perform a 2 Engine Precision Approach Cat I ILS and Landing*
        - 6.1.2 Perform a 1 Engine Inoperative Cat I ILS Approach*
        - 6.1.2 Perform Cat II ILS
        - 6.1.3 Perform Cat IIIb ILS
        - 6.1.4 Perform Coupled Autopilot Approach and Autoland Procedures
        - 6.1.5 Perform Non-Precision Approach Procedures (VOR, NDB, LOC, LOC/BC, LDA, SDF, ASR, RNav/FMS, GPS)
        - 6.1.6 Perform an IMC One Engine Inoperative Missed Approach
    - 6.2 Visual Approach
        - 6.3.1 Perform Visual Approach and Landing
        - 6.3.2 Perform Visual Approach and Rejected landing

* Used as an example.

Generic Airlines Inc	Operations Manual	Volume 9
Chapter 3: Qualification Standards, B-767 Flightcrew		
Rev. # Original		Dated 06/15/05
Task: 6.1 Perform An Instrument Approach		
Duty Position: All		
Criticality: Yes	Currency: Yes	
Curricula: Qualification and Continuing Qualification		

Performance Statement:
All instrument approach procedures will be conducted in accordance with the applicable profiles as outlined in Volume 6 of the Operations Manual (B-767 Flight Standards). During all instrument approaches, the PF will configure the airplane so as to be stabilized on the approach by 500 feet below the FAF. The PNF will continuously monitor the approach and make the required instrument approach altitude calls and deviation calls based on the parameters defined in Volume 6 Chapter 3, of the Operations Manual.

Conditions:		Contingencies:	
IMC	* lowest approach minimums	Flight Director Inop FMS Inop Autopilot Inoperative * Windshear Loss of ATC Communication	Engine Failure Inside of the FAF Loss of Flight /Navigation Instrument
Turbulence	* light		
Strong Cross Winds Present	* 15K		
Icing Conditions Present	* light rime		

Standards:
During all instrument approaches, the PF achieves and maintains a stable airspeed, descent rate, vertical flight path, and configuration by 500 feet below the FAF. Between 1000 feet and 500 feet above DH or MDA, only minimum deviations from the standards below occur, and are corrected with the proper calls and responses as defined in Volume 6 of the Operations Manual. Below 500 above DH or MDA in IMC conditions, with any deviations greater than these standards, the crew calls for and executes a missed approach. The following standards apply: Prior to the FAF, the PF maintains desired altitude within +/- 100 ft., desired heading within +/- 5 degrees, and desired airspeed within +/- 10 knots; Inside the FAF or Final Segment, the PF maintains desired Airspeed within +5 or -0 knots, Localizer or VOR course within 1/2 dot either side, RMI course within +/- 5 degrees, Glideslope within 1/2 dot either side, Sink rate within 1000 fpm, and desired altitude on a non-precision approach within +50/-0 feet. The crew makes all of the required instrument approach calls and responses as detailed in Volume 6 of the Operations Manual. Volume 6 of the Operations Manual The crew complies with all ATC instructions and clearances or advises ATC if unable. The crew complies with the specific instrument approach profile as depicted in Volume 6 of the Operations Manual. The instrument approach procedure is flown correctly and adjusted as necessary based on equipment availability or other factors. The crew immediately initiates a missed approach upon arriving at the DH or MAP if the required visual references are not distinctly visible. The landing checklist is completed in a timely manner without errors or omissions.

At all times during the approach, the crew uses standard phraseology and procedures to improve situational awareness, and communicates changes in systems or flight profiles in a clear, timely manner. The crew demonstrates strong knowledge of, and makes sound judgments concerning instrument approach procedures and policies.

Media: Level C Simulator

Evaluation Strategy: Qualification - Maneuvers Validation/Continuing Qualification - LOE

Reference:
Volume 6 of the Operations Manual
Airman's Information Manual Chapter: 1
Airman's Information Manual Chapter: 5
Jeppesen Airway Manual

* identifies specific condition used during qualification validation/evaluation

Generic Airlines Inc	Operations Manual	Volume 9
Chapter 3: Qualification Standards, B-767 Flightcrew		
Rev. # Original		Dated 06/15/05
Task: 6.1.1 Perform a 2 Engine Precision Approach Cat I ILS		
Duty Position: All		
Criticality: No	Currency: Yes	
Curricula: Qualification and Continuing Qualification		

Performance Statement:
The crew will complete the appropriate approach briefing prior to the initial approach fix. Once cleared for the approach, the PF will configure the airplane prior to the FAF per the Generic Airline B-767 Precision Approach Profile, so as to be stabilized on the approach by 500 feet below the FAF as outlined in Volume 6 of the Operations Manual. The PF will call for the configuration changes and the PM will perform each action. The landing checklist will be completed during the approach prior to landing. The PM will give the required altitude calls in reference to DH as outlined in Volume 6 of the Operations Manual. When deviations from the standards occur, the PNF will give the proper correction call outs as defined in Volume 6 of the Operations Manual. With the adequate visual references in sight, the crew will execute the required calls and responses and transition to a normal landing. If, upon arriving at DH, neither the approach lights nor runway is in sight, then the PM will call for the missed approach. If upon arriving at DH and only the approach light system is visible the PF may continue the approach down to 100 feet above touchdown zone elevation. If at this point the requirements of FAR 91.175 are not visible, the PF will call for the missed approach and the crew will perform the missed approach procedures. If the runway environment becomes visible prior to 1000 feet above DH, the PM will call the runway in sight and the PF will state "Visual Calls." The PM will then proceed with stating the appropriate visual approach calls and the visual approach procedures may be applied

Conditions:	Contingencies:
IMC	Flight Director Inop
Strong Cross Winds Present	FMS Inop
Icing Conditions Present	Autopilot Inoperative

Standards:
For all precision instrument approaches, the PF achieves and maintains a stable airspeed, descent rate, vertical flight path, and configuration by 500 Below DH. Between 1000 feet and 500 feet above DH, only minimum deviations from the standards below occur, and are corrected with the proper calls and responses as defined in Chapter 6, Volume 6 of the Operations Manual). Below 1000 above DH in IMC conditions, with any deviations greater than these standards, the crew calls for and executes a missed approach. The following standards apply: Prior to the FAF, the PF maintains desired altitude within +/- 100 ft., desired heading within +/- 5 degrees, and desired airspeed within +/- 10 knots; Inside the FAF or Final Segment, the PF maintains desired Airspeed within +5 or -0 knots, Localizer course within 1/2 dot either side, and Glideslope within 1/2 dot either side. The crew makes all of the required instrument approach calls and responses as detailed in Volume 6 of the Operations Manual. The crew complies with all ATC instructions and clearances or advises ATC if unable. The crew complies with the Generic Airlines Precision Instrument Approach Profile as depicted in Volume 6 of the Operations Manual). The instrument approach procedure is flown correctly and adjusted as necessary based on equipment availability or other factors. The crew immediately initiates a missed approach upon arriving at the DH if the required visual references are not distinctly visible. The landing checklist is completed in a timely manner without errors or omissions. The crew demonstrates strong knowledge of, and makes sound judgements

Media: Level C Simulator

Qualifying Evaluation Event: Maneuvers Validation/Continuing Qualification – Line Check (Sample)

Reference:
Volume 6 of the Operations Manual
Airman's Information Manual Chapter: 1
Airman's Information Manual Chapter: 5
Jeppesen Airway Manual

Generic Airlines Inc	Operations Manual	Volume 9
Chapter 3: Qualification Standards, B-767 Flightcrew		
Rev. # Original		Dated 06/15/05
6.1.2 Perform One Engine Inoperative Cat I ILS Approach		
Duty Position: All		
Criticality: Yes	Currency: No	
Curricula: Qualification and Continuing Qualification		

Performance Statement:
The crew will complete the appropriate approach briefing prior to the initial approach fix. Once cleared for the approach, the PF will configure the airplane prior to the FAF per the Generic Airline B-767 Precision Approach Profile, so as to be stabilized on the approach by 500 feet below the FAF as outlined in Volume 6 of the Operations Manual. The PF will call for the configuration changes and the PM will perform each action. The landing checklist will be completed during the approach prior to landing. The PM will give the required altitude calls in reference to DH as outlined in Volume 6 of the Operations Manual. When deviations from the standards occur, the PM will give the proper correction call outs as defined in Volume 6 of the Operations Manual. With the adequate visual references in sight, the crew will execute the required calls and responses and transition to a normal landing. If, upon arriving at DH, neither the approach lights or runway is in sight, then the PM will call for the missed approach. If upon arriving at DH and only the approach light system is visible the PF may continue the approach down to 100 feet above touchdown zone elevation. If at this point the requirements of FAR 91.175 are not visible, the PF will call for the missed approach and the crew will perform the missed approach procedures. If the runway environment becomes visible prior to 1000 feet above DH, the PM will call the runway in sight and the PF will state "Visual Calls." The PM will then proceed with stating the appropriate visual approach calls and the visual approach procedures may be applied

Conditions:	Contingencies:
IMC Strong Cross Winds Present	Autopilot Inoperative

Standards:
The PF achieves and maintains a stable airspeed, descent rate, vertical flight path, and configuration by 500 Below DH. Between 1000 feet and 500 feet above DH, only minimum deviations from the standards below occur, and are corrected with the proper calls and responses as defined in Chapter 6, Volume 6 of the Operations Manual). Below 1000 above DH in IMC conditions, with any deviations greater than these standards, the crew calls for and executes a missed approach. The following standards apply: Prior to the FAF, the PF maintains desired altitude within +/- 100 ft., desired heading within +/- 5 degrees, and desired airspeed within +/- 10 knots; Inside the FAF or Final Segment, the PF maintains desired Airspeed within +5 or -0 knots, Localizer course within 1/2 dot either side, and Glideslope within 1/2 dot either side. The crew makes all of the required instrument approach calls and responses as detailed in Volume 6 of the Operations Manual. The crew complies with all ATC instructions and clearances or advises ATC if unable. The crew complies with the Generic Airlines Precision Instrument Approach Profile as depicted in Volume 6 of the Operations Manual). The instrument approach procedure is flown correctly and adjusted as necessary based on equipment availability or other factors. The crew immediately initiates a missed approach upon arriving at the DH if the required visual references are not distinctly visible. The landing checklist is completed in a timely manner without errors or omissions. The crew demonstrates strong knowledge of, and makes sound judgments

Media: Level C Simulator

Qualifying Evaluation Event: Maneuvers Validation/Continuing Qualification: Maneuvers Validation

Reference:
Volume 6 of the Operations Manual
Airman's Information Manual Chapter: 1
Airman's Information Manual Chapter: 5
Jeppesen Airway Manual