CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Air Traffic Organization Policy

JO 7210.634A
CHG 1

Effective Date:
September 1, 2021

SUBJ: Air Traffic Organization (ATO) Quality Control

1. Purpose of This Change. This change updates guidance for the Technical Operations Services Quality Control Program and makes other editorial changes throughout the document.

2. Audience. This change applies to the following Air Traffic Organization (ATO) service units: Technical Operations Services (AJW), Safety and Technical Training (AJI), Mission Support Services (AJV), System Operations Services (AJR), and Air Traffic Services (AJT).

3. Where Can I Find This Change? This order is available on the MyFAA Employee website at https://employees.faa.gov/tools_resources/orders_notices/ and the Federal Aviation Administration website at http://www.faa.gov/regulations_policies/orders_notices/.

4. Explanation of Policy Change.

a. Cancels the System Service Review Guidance memorandum signed by the Vice President of Technical Operations Services on May 2, 2018, incorporating all pertinent guidance into this Change.

b. Replaces Chapter 8, Technical Operations Quality Control Programs.

c. Adds new Appendix F, Technical Operations Services System Service Review (SSR), Corrective Action Plan (CAP), and Systemic Issue Review (SYSIR) Templates.

d. Updates the definition of Aviation Risk Identification and Assessment (ARIA).

e. Replaces references to Performance Skill Checks with Performance Assessments.

f. Deletes a legacy reference to Electronic Occurrence Report (EOR).

5. Distribution. This change is distributed to the following ATO service units: AJT, AJW, AJR, AJI, and AJV. In addition, the order is distributed to the following: the Air Traffic Safety Oversight Service (AOV), the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, the National Air Traffic Controllers Association (NATCA), Professional Aviation Safety Specialists (PASS), the National Association of Government Employees (NAGE), and to the interested aviation public.

6. Background. This change updates the Technical Operations Services Quality Control (QC) Program by providing specific procedures and processes for SSR, SYSIR, CAP, and Compliance

Verification used to measure the quality of AJW products and services. Additionally, this change incorporates several minor editorial updates and a change to the ARIA definition.

7. Disposition of Transmittal. Retain this transmittal until superseded by a new basic order.

8. Page Control Chart. See below.

PAGE CHANGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
ii and iii	**10/1/20**	**ii and iii**	**09/01/2021**
1-1	**10/1/20**	**1-1**	**09/01/2021**
1-3 through 1-6	**10/1/20**	**1-3 through 1-6**	**09/01/2021**
2-3 and 2-4	**10/1/20**	**2-3 and 2-4**	**09/01/2021**
4-11 and 4-12	**10/1/20**	**4-11 and 4-12**	**09/01/2021**
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B-1	**10/1/20**	**B-1 and B-2**	**09/01/2021**
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E-1 and E-2	**10/1/20**	**E-1 and E-2**	**09/01/2021**
		F-1 through F-6	**09/01/2021**

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Chapter 1. General

1-1. Purpose of This Order. The purpose of quality control, as defined in the Air Traffic Organization (ATO), is to assess the output (whether a product or service) of a particular process or function and identify any deficiencies, risk, or problems that need to be addressed. Within this quality control concept, it is a primary responsibility to take action, particularly at the Service Delivery Point (SDP), to ensure that these products or services meet the requirements of the SDP and the ATO organizationally. This order outlines the processes and steps used to ensure the quality of products and services provided at the SDP level on an ongoing basis.

1-2. Audience. The chapters of this order apply to ATO service units as follows: Chapters 1–7 and related Appendices: Air Traffic Services, System Operations Services; Chapter 1, Chapter 8, and Appendix F: Technical Operations Services; and this entire order is applicable to Mission Support Services due to their unique support role for the service units.

1-3. Where Can I Find This Order? This order is available on the MyFAA Employee website at https://employees.faa.gov/tools_resources/orders_notices/ and the Federal Aviation Administration (FAA) website at http://www.faa.gov/regulations_policies/orders_notices/.

1-4. Cancellation. This order cancels FAA Order JO 7210.634, *Air Traffic Organization (ATO) Quality Control*.

1-5. Explanation of Policy Changes. This revision adds and deletes definitions in paragraph 1-8; incorporates Aviation Risk Identification and Assessment (ARIA), Barrier Analysis Review (BAR), Preliminary ARIA Report (PAR), Referred ARIA Report (RAR), and Combined Safety Barrier Review (CSBR); clarifies organizational responsibilities; adds Chapter 2 and the Quality Control Model; clarifies requirements of the Service Review and Compliance Verification (CV) processes; incorporates ATO Safety Guidance ATO-SG-15-03 and ATO-SG-12-05; incorporates Corrective Action Plans (CAPs) and processes; deletes Quality Control Checks and associated processes; adds Performance Assessment Validations; adds and updates the charts contained in the Appendices; and makes general organizational and editorial updates.

1-6. Distribution. This order is distributed to the following ATO service units: Air Traffic Services (AJT), Technical Operations Services (AJW), System Operations Services (AJR), Safety and Technical Training (AJI), and Mission Support Services (AJV). In addition, the order is distributed to the following: the Air Traffic Safety Oversight Service (AOV), the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, the National Air Traffic Controllers Association (NATCA), Professional Aviation Safety Specialists (PASS), the National Association of Government Employees (NAGE), and the interested aviation public.

1-7. Organizational Responsibilities.

a. Vice Presidents, or designees, of AJT, AJR, AJW, and AJV must:

(1) Develop all policies and procedures related to quality control.

(2) Ensure that their respective organizations comply with the requirements of this order.

(1) Ensure that their organization complies with the requirements of this order.

(2) Coordinate with the Director(s) of Operations and assist and ensure that the Director(s) of Operations meet their quality control requirements as described in this order.

(3) Ensure that Service Center groups coordinate their actions to support Service Center requirements.

b. SDP Manager, General Manager, Assistant General Managers, and Technical Operations Services District/Group Managers must:

(1) Ensure that their respective organization complies with the requirements of this order.

(2) Provide oversight and support to their subordinate managers to ensure that they are able to meet their quality control requirements as described in this order.

(3) Continually review available quality control data and information and develop initiatives and/or take actions when appropriate.

(4) Coordinate with their Director of Operations and/or Service Center Quality Control Group, and other SDPs as appropriate, when developing initiatives or taking actions to ensure organizational consistency and effective resource management and communication.

(5) Respond to requests and/or actions initiated by Safety and Technical Training in their quality assurance role.

c. Flight Service Stations (FSSs) / U.S. NOTAM Office / Federal Contract Flight Service Stations (FSSs) must conduct quality control measures according to Appendix A and Appendix B, respectively.

1-8. Definitions.

a. Aviation Risk Identification and Assessment (ARIA). An automated system that helps employ risk-based, data-driven decision-making facilitating better insight into potential risk in the National Airspace System (NAS).

b. Barrier Analysis Review (BAR). The process used to assess severity, likelihood, and barrier effectiveness in Referred ARIA Reports. Barrier analysis is also used to identify and assess factors (mitigating, aggravating, or observed) for air traffic operations where at least one aircraft is receiving Air Traffic Control (ATC) services.

c. BAR Report. The output of the BAR process.

d. Checklists. Checklists are used as minimum guidance in preparing for and conducting Internal Compliance Verifications (ICVs) / External Compliance Verifications (ECVs).

e. Combined Safety Barrier Review Output. The resulting output from the Combined Safety Barrier Review process.

f. Combined Safety Barrier Review (CSBR). A cooperative process between Quality Assurance (QA) and facilities to gather additional information from subject matter experts and inform all concerned individuals about potential areas of risk in the system. This process utilizes aggregate data from BAR (if available) and includes facility stakeholders in an effort to identify, assess, and mitigate risk present in the operation.

g. Compliance Verification Tool (CVT). A national database that contains information related to the compliance verification process. Information includes checklists, reports, facility information, tracking information, response data, and other statistical information available on the CVT website. Information contained in reports, any corrective action, status reports, and closure is submitted through this database system.

h. Comprehensive Electronic Data Analysis and Reporting (CEDAR). A web-based, comprehensive data reporting, collection, and analysis tool used by both Quality Control (QC) and QA to record data associated with their respective organizational responsibilities.

i. CEDAR Question Tree. An electronic entry method used within the quality control service review processes to capture specific data points regarding information about operational circumstances during the period under review. Question trees are based on a user-friendly question and answer format that guides the user through the electronic "form."

j. Conformity Index (CI). This item applies to federal and federal contract flight service stations only. Each on-site ICV/ECV conducted by the Flight Service Directorate must include a CI. The CI must essentially be the result of aggregating the weighted indices for each of the functional areas (system safety, system efficiency, and system management) on the national checklist. System safety is weighted more than the other functional areas. Instructions for calculating the CI are available from the CVT. The Flight Service Directorate acknowledges that no two facilities are identical; therefore, CIs are not intended to compare facilities. The intent of the CI is to numerically depict a facility's overall compliance with directives/regulations and to assist with identifying "at risk" facilities for non-compliance.

k. Corrective Action Plan (CAP). CAPs are collaborative activities enacted to correct non-compliance and areas of risk that have been properly identified, validated, and understood through data collection and analysis. A CAP contains a description of the mitigation actions, the scope of the CAP, a timeframe for completion, a defined monitoring plan, and a defined effectiveness target.

l. Desk Audit. A desk audit is an off-site method of assessing checklist and off-checklist items. It is accomplished through discussion with facility personnel and/or review of requested or obtained recordings, data, and/or documentation.

m. Direct Monitoring. Monitoring an operational position real-time from the same position (for example, monitoring arrival east while physically sitting at arrival east).

n. External Compliance Verification (ECV). An externally initiated assessment of a facility, conducted primarily by the Quality Control Group (QCG) and/or additional personnel, in response to data-driven indicators of potential risk and/or practices. An ECV may be conducted on-site, using a customized checklist, to assess a facility's overall performance. ECVs are conducted on an as-needed basis as determined via indicators of potential risk and non-compliance.

o. Internal Compliance Verification (ICV). A facility's self-evaluation that is conducted by the facility / designated personnel using the checklists contained in the CVT and procedures outlined in this directive.

p. Off-Checklist Item. An assessed item that is not specifically identified on a national checklist.

q. Operational Skills Assessment (OSA) Worksheet. An electronic worksheet in CEDAR used to document an individual's technical performance.

r. Playback Monitoring. Indirectly monitoring an operational position at any date/time other than live/real-time using available playback tools (Falcon, etc.) synchronized with a voice file.

s. Preliminary ARIA Report (PAR). An initial report of an air traffic operation identified by ARIA for further review by QA personnel.

t. Quality Assurance Group (QAG). The office in each service area responsible for conducting occurrence classification, identifying and categorizing air traffic incidents, identifying reports for barrier analysis, and conducting barrier analysis reviews in support of the ATO Top 5 and other safety processes. The mission of the QAGs may encompass other duties, including identifying significant safety risk trends and identifying potential significant events.

u. Quality Control Group (QCG). The office in each service center responsible for conducting data-driven external compliance verifications, identifying and delivering SDP non-compliance/risk data to the Directors of Operation and SDPs, assessing the effectiveness of SDP corrective actions, facilitating the significant event process, and monitoring SDP QC programs while ensuring that they are in compliance and completed in accordance with directives.

v. Referred ARIA Report (RAR). Subset of Preliminary ARIA Reports identified for BAR.

w. Remote Monitoring. Indirectly monitoring an operational position in real-time from a remote location (watch desk, operations supervisor desk, other operational position, etc.).

x. Service Delivery Point (SDP). An air traffic control facility, flight service station, or staffed/unstaffed technical operations facility.

y. Significant Safety Risk. Identified ATO exposure to risk that has a high likelihood of occurrence and/or severity.

z. Special Evaluation. This item applies to federal contract flight service stations only and assesses specific areas, programs, offices, or organizations as directed by the Flight Service Directorate.

aa. Systemic. An identified safety concern that has the potential to introduce risk into the national airspace system at the local, district, regional, service area, or national level.

bb. Voluntary Safety Reporting Program (VSRP). A voluntary program that provides a confidential, non-punitive mechanism for employees to report safety events and problems. VSRPs use employee input to identify leading indicators and significant safety concerns and issues, operational deficiencies, non-compliance with regulations, deviations from policies and procedures, and potential risk in the system. Qualitative data received through this program helps identify indicators of potential hazards and areas of risk in the NAS.

1-9. Related Publications.

a. FAA Order JO 7210.632, *Air Traffic Organization Occurrence Reporting*.

b. FAA Order JO 7210.633, *Air Traffic Organization (ATO) Quality Assurance (QA)*.

c. FAA Order JO 3400.20, *Individual Performance Management (IPM) for Operational Personnel*.

d. FAA Order JO 1030.3, *Initial Event Response*.

e. FAA Order JO 7200.21, *Partnership for Safety Program*.

f. FAA Order JO 7200.20, *Voluntary Safety Reporting Programs*.

g. FAA Order JO 3120.4, *Air Traffic Technical Training*.

h. FAA Order JO 7110.65, *Air Traffic Control*.

i. FAA Order JO 1000.37, *Air Traffic Organization Safety Management System*.

j. FAA Order JO 7110.10, *Flight Services*.

k. FAA Order JO 6040.6, *National Airspace System Technical Evaluation Program*.

l. FAA Order 6000.15, *General Maintenance Handbook for National Airspace System (NAS) Facilities*.

data through standardized processes. Before developing a CAP or invalidating a potential systemic issue, facilities must assess potential issues by using one of the following processes:

(a) Service reviews.

(b) Compliance verifications.

(c) CSBR. Requests for CSBR are made through the respective service area QA office.

REFERENCE–
FAA Order JO 7210.633, Chapter 3, Requesting Combined Safety Barrier Review.

NOTE–
It is understood that with some significant events or compliance issues, facilities may need to implement corrective actions prior to conducting an assessment. This should happen only under unusual circumstances. When this occurs, a service review must be conducted as soon as possible to validate or modify the issue and CAP.

(3) **Develop and Implement CAPs.** Once a problem is understood (assessed and analyzed), facilities must collaboratively develop a CAP. CAPs must be designed to address the specific problem and be implemented throughout the facility or applicable operational area. In addition, CAPs must include how the effectiveness of implemented mitigations will be assessed. Facilities must monitor implemented CAPs as they continue to collect data. This can be done through performing QC OSAs, designing specific Emphasis Items to assess a specific CAP, performing ICVs, reviewing reported/detected occurrence data, reviewing BAR/CSBR data, or analyzing data available in the PFS Portal through the LSC.

(4) **Document.** Facilities must document CAPs within CEDAR to maintain a record of implemented corrections for mitigation monitoring and effectiveness determinations. CAPs resulting from the ICV and ECV processes are documented in the Compliance Verification Tool. LSC corrective actions, safety information, and problems should be documented in CEDAR and shared in ATC InfoHub.

(5) **Data Integrity.** Facilities must ensure that data collected through QC OSAs and Emphasis Items accurately reflect demonstrated technical performance. In addition, facilities must validate documentation associated with On-the-Job Training (OJT) and Certification Skill Checks / Performance Assessments to ensure that these processes accurately reflect facility performance. This ensures a solid foundation of data upon which CAPs are built.

2-2. Facility/District QC Orders.

a. Facilities and/or districts must not create QC orders that either duplicate or contradict the national order or collective bargaining agreement.

b. Facility/district QC orders (see Appendix D) may only contain the following elements:

(1) QC OSA sampling plan (see Appendix D).

(2) Plan for conducting random/scheduled System Service Reviews (SSRs) (and Traffic Management Reviews (TMRs) for facilities with Traffic Management Units).

(3) Designation of points of contact for Systemic Issue Reviews (SYSIRs).

(4) QC OSA Validation sampling plan to be documented in CEDAR.

(5) Certification Skill Check and Performance Assessment Validation process to be documented in CEDAR.

(6) OJT Documentation Validation process to be documented in CEDAR.

(7) Requirements for recurring reports on performed QC processes, results of analyses of safety data, implemented corrective action plans, and data monitoring activities.

2-3. Local (Facility) Safety Reports.

a. Overview.

(1) Facilities are encouraged to create regular reports of collected data to support the identification of non-compliance and risk, provide visibility into facility performance, and ensure that the facility's QC program is operating as intended. Reports can be generated monthly, quarterly, or at some other frequency depending on the available resources, size, and complexity of the facility; the amount of available data; and identified compliance issues. A sample of possible facility safety report data is contained in Appendix D, and an example facility QC Activity Plan is contained in Appendix E.

(2) Facilities are encouraged to include the data listed below in their recurring safety reports.

(a) Status: This section should list the status of required QC processes. The following should be considered:

i. QC OSAs conducted during the reporting period.

ii. Emphasis Items (include pre-existing Emphasis Items, new Emphasis Items created during the reporting period, and Emphasis Items closed during the reporting period).

iii. Service reviews conducted during the reporting period (include each different service review (SSR, Covered Event Review, TMR, SYSIR) and the reason for each).

iv. Status of current fiscal year ICV (include the percentage of items completed and remaining).

v. QC Validation information (include numbers of items reviewed and whether this is in accordance with the facility plan for each).

(a) Review of collected data (e.g., QC OSA data, MOR data, BAR output, compliance verification data, and Emphasis Item data).

(b) Interviews of operational and/or staff personnel.

(c) An examination of training materials and documentation (e.g., OJT, recurrent training, refresher training, and MBIs).

(d) Review of operational replays and/or voice recordings.

(e) Review of local/national directives.

(f) Review of operational reference material (approach plates, charts, etc.).

(g) Review of sector/airspace/runway configuration/usage.

(h) Review of equipment installation, operation, configuration, and availability.

(i) Review of traffic management initiatives, procedures, and compliance.

(j) Review of Partnership for Safety Portal data.

(k) Collection of additional data through Emphasis Items or the facility ICV.

NOTE–
This list is not all-inclusive. There are other items that may need examination. Teams should ensure that all pertinent avenues are explored prior to closing the SYSIR.

(4) Once the examination is complete, the designee must close the item in CEDAR with one of the following three responses:

(a) Concur: This response is appropriate if the SYSIR identifies/validates a previously unrecognized risk or non-compliance. The designee must concisely document the systemic issue identified in the SYSIR comments and close the SYSIR. The SDP must then employ corrective action. A CAP must be created, and mitigations initiated, via the "Create CAP" function within the SYSIR within 30 calendar days of SYSIR closure. The corrective action does not have to be completed to close the SYSIR.

(b) Concur and Elevated: This response is appropriate if the SYSIR collaborative team identifies an issue, but the means to mitigate the issue is above the SDP level. The designee must concisely document the reason(s) the SDP cannot correct the identified issue in the SYSIR comments, select "Concur and Elevated," and close the SYSIR in CEDAR. Before submitting an issue as "Concur and Elevated," the SDP must consult with applicable district staff. "Concur and Elevated" SYSIRs are forwarded automatically through CEDAR. They will be routed as follows:

i. To the QCG to be worked collaboratively with the NATCA Service Area Safety Representative. If the QCG is able to coordinate mitigations for the item, they must document actions taken in the elevated SYSIR prior to closure. If the QCG non-concurs, they must document the reasoning for making this determination, inform the SDP, and then close the item. If the QCG is unable to facilitate a solution but agrees there is an issue, they must concisely document the reason(s) they cannot mitigate the identified issue in the SYSIR comments, select "concur and elevated," and close the SYSIR in CEDAR.

ii. The "concur and elevated" SYSIR will then be routed to the AJI Safety Services Group, AJI-15, for resolution. AJI-15 will work the item to closure. AJI-15 will either concur, and the item will be mitigated at the national level, or non-concur, and the item will be closed after documenting why this determination was made. The appropriate service center QCG must be notified by AJI-15 of the non-concur determination.

NOTE–
AJI-15 will contact applicable service unit(s) with the identified issue(s) and preliminary data to support the topic. AJI-15 will work with the applicable service unit(s) to identify any additional supporting data and develop potential mitigation(s).

NOTE–
If CEDAR is temporarily unavailable, retain the results and enter them in the SYSIR as soon as it becomes available.

(c) Does Not Concur: This response is appropriate if the collaborative team has examined the issue identified in the SYSIR but cannot identify any unrecognized risk or non-compliance. The designee must document the steps taken to examine the issue and the reason(s) for selecting "Does Not Concur," and close the SYSIR in CEDAR.

Chapter 6. Quality Control Validations

6-1. Quality Control Validations (QCVs). QC data collected by facilities is the foundation for local, service area, and national compliance assessments and corrective actions. It is imperative that facilities accurately capture data collected in all QC processes to ensure the effective identification of non-compliance and associated corrective actions. QCVs are the primary method that facilities must use to ensure the integrity of data collected in QC processes. QCVs require facilities to review samplings of QC OSAs, Certification Skill Checks / Performance Assessments, and OJT documentation to validate accuracy and completeness within each process. The QCV process is a statistical sampling of a particular process or task to ensure compliance and accuracy. This process may also identify potential systemic issues associated with training, efficiency, airspace, procedures, directives, and equipment. If risk is determined to exist, facilities must determine the appropriate mitigation strategy and document a CAP in CEDAR within 30 calendar days.

a. SDPs must develop a local validation plan for each of the three required QCVs. Local validation plans must contain the following:

(1) Target number of validations to be performed: Targets may be defined by any calendar unit (e.g., monthly, quarterly, annually). Validations must be conducted in sufficient numbers (a representative sampling) to ensure an accurate assessment of facility performance in conducting each of the processes being validated. It is recommended that SDPs validate a minimum of 15% of all QC OSAs, Certification Skill Checks / Performance Assessments, and OJT Instructor (OJTI) documentation each quarter at each SDP.

(2) Sampling method: While each process should be sampled randomly, local validation plans should include selection methods that ensure a cross-section of sectors/positions are reviewed. For example, a local validation plan could include a requirement that at least one QC OSA for each operational position be validated each fiscal year.

(3) Replay tools to be used: SDPs must use both voice and radar/surveillance data (where available) to compare actual performance to that documented by the reviewer/OJTI. Validations must be conducted within the maximum data retention periods for the facility to ensure availability of required data.

(4) Feedback process: SDPs may provide feedback to individual non–bargaining unit personnel for QCVs when appropriate. Individual feedback must always come through the individual's immediate supervisor. SDPs must only provide facility-wide feedback to bargaining unit employees for all QCVs.

(5) Follow-up process: SDPs must follow up on issues identified through validations to ensure that the feedback or corrective action was effective in improving the respective process (QC OSAs, Certification Skill Checks / Performance Assessments, and OJT documentation). Follow-up processes related to non-corrective action plans should include a review of the previously identified feedback issue, a defined period for follow-up review, and closure if the issue is resolved. If the issue still exists, additional feedback must be provided. For matters that

resulted in a CAP, the monitoring and effectiveness goals will indicate the success of any implemented corrective action.

b. QCVs must be conducted in accordance with Article 51 of the FAA/NATCA Collective Bargaining Agreement, which defines union participation. Facilities are encouraged to establish collaborative teams to conduct QCVs.

c. QCVs must only be used to identify organizational or systemic issues.

d. OSA Validations. SDPs must establish a validation process whereby representative samplings of OSAs are evaluated to ensure accuracy and completeness. At a minimum, SDPs must use both voice and radar/surveillance data (where available) to compare actual performance to that documented by the reviewer. The purpose of this initiative is to ensure that the reviewer has captured the performance of the trainee accurately in the OSA. These reviews provide an opportunity to identify exemplary performance that can be shared in the facility as a best practice, as well as any performance deficiencies or risky behaviors that otherwise may have been overlooked. Districts must ensure that sufficient assistance is provided to facilities with limited managerial resources in order to comply with this requirement. The validation process must include:

(1) Feedback to the person conducting the OSA through their immediate supervisor, except as noted in paragraph 6-1a.(4); and

(2) Follow-up mechanisms to ensure that the feedback was effective if OSA improvement is required.

e. Certification Skill Check and Performance Assessment Validations. SDPs must establish a validation process whereby representative samplings of Certification Skill Checks and Performance Assessments are evaluated to ensure accuracy and completeness. At a minimum, SDPs must utilize both voice and radar/surveillance data (where available) to compare actual performance to that documented by the reviewer. The purpose of this initiative is to ensure that the OS/STMC/NTMO has accurately captured the performance of the developmental, Certified Professional Controller-in-Training (CPC-IT), or the Traffic Management Controller-in-Training (TMC-IT) / Traffic Management Specialist-in-Training and/or Developmental/OS/STMC/NTMO during a Certification Skill Check or Performance Assessment. These reviews provide an opportunity for an SDP to ensure consistency in their skill checks / assessments as well as identify performance deficiencies or risky behaviors that otherwise may have been overlooked. Districts must ensure that sufficient assistance is provided to facilities with limited managerial resources in order to comply with this requirement. The validation process must include:

(1) Feedback to the person conducting the skill check / assessment through their immediate supervisor and

(2) Follow-up mechanisms to ensure that the feedback was effective if skill check / assessment improvement is required.

f. On-the-Job Training Documentation (OJTD) Validations. SDPs must establish a validation process whereby they assess the accuracy and completeness of the documentation provided by OJT instructors. The purpose of the OJTD is to ensure that OJTIs accurately captured the performance of the CPC-IT/TMC-IT/NTMS-in-training/developmental/OS/STMC/NTMO during OJT. These reviews provide an opportunity for an SDP to ensure consistency in the conduct and documentation of OJT and to identify performance deficiencies on the part of OJTIs. Districts must ensure that sufficient assistance is provided to facilities with limited managerial resources in order to comply with this requirement.

(1) When conducting OJTD validations, SDPs must review a representative sampling of the OJT documentation for the year under review using available replay tools.

(a) SDPs must use both voice and radar/surveillance data (where available) to compare actual performance to that documented by the reviewer.

(b) Tower-only facilities without surface radar are expected to use voice files to the maximum extent possible to assess any OJT sessions reviewed in this process.

(2) The validation process must include:

(a) Feedback to the SDP OJTIs;

(b) Refresher training, if appropriate, to SDP OJTIs. If assigned, document refresher training in the employee's FAA Form 3120-1, Training and Proficiency Record, using CEDAR; and

(c) Follow-up mechanisms to ensure that feedback and training were effective.

Chapter 8. Technical Operations Services Quality Control Program

8-1. Purpose. The Technical Operations Services Quality Control (QC) Program analyzes NAS events with a goal of identifying systemic trends and mitigating operational risks. The QC program also analyzes performance characteristics of NAS systems and services, as well as maintenance policy compliance by Technical Operations Services personnel. This chapter provides specific procedures and processes used to measure the quality of Technical Operations Services products and services provided. They consist of the following components:

- System Service Review (SSR)
- Systemic Issue Review (SYSIR)
- Corrective Action Plan (CAP)
- Compliance Verification (CV)

a. The QC program components in this chapter apply to the Technical Operations Services directorates and organizations where they have been implemented.

b. The success of a QC program is dependent upon the ability to focus on data collection, analysis, and systemic identification to reduce risk—not to assign blame or exert punishment. The discussion of the event with an employee is not an investigatory interview, and employees must be free to share their knowledge of the facts of an event without fear of retribution.

c. SSRs, SYSIRs, and CAPs are documented in the safety database. The current safety database is CEDAR, located at https://cedar.faa.gov. To assist managers, the Technical Operations CEDAR Desk Guide can be found under the Tech Ops User Guide section of the "Help" tab at https://cedar.faa.gov. This guide provides detailed instructions on how to perform SSR, SYSIR, and CAP entries and document review in the CEDAR safety database.

d. Voluntary Safety Reporting. The VSRP is a separate but parallel program that provides a method to identify and correct potential safety hazards by encouraging voluntarily submitted safety reports from employees. Information on the VSRP can be found in FAA Order JO 7200.20A, *Voluntary Safety Reporting Programs*, and/or applicable Memorandum of Agreement (MOA) / Memorandum of Understanding (MOU). Filing or acceptance of a VSRP report does not take the place of, or preclude, a SSR being conducted.

8-2. Technical Operations Services System Service Review (SSR). A key component of the Technical Operations Services Quality Control Program is the SSR. The SSR is a comprehensive review following events that have resulted in, or could have resulted in, operational consequences with discernable impacts to the NAS systems and/or services. SSRs are conducted to determine the causal factors of the event, determine why an event occurred, document those findings, and develop any necessary corrective actions to reduce risk to the NAS. SSRs are also used to review if policies or procedures can be enhanced or corrected to prevent similar events from occurring in the future.

a. When to conduct a SSR. The following events require a SSR to be conducted:

(1) Services Rendered Teleconference (SRT) that results in a color code Yellow or Red, with Technical Operations Services involvement;

(2) Technical Operations Services deviation resulting in unscheduled system/service interruption;

(3) Technical Operations Services coordination deviation or lack of coordination that results in unscheduled system/service interruption;

(4) Errors in a documented process or procedure resulting in unscheduled system/service interruption;

(5) Required system/service Notices to Airmen not properly published;

(6) Surface Incident or Runway Incursion with Technical Operations Services involvement;

(7) ATC Zero caused by Technical Operations Services system/service failure or personnel action/inaction;

(8) If requested by Technical Operations Services management at the headquarters, directorate, district, or group level.

b. How to conduct a SSR. The Group Manager and Front Line Manager (FLM) are responsible for leading an open comprehensive fact-finding review with all personnel involved in the planning, risk assessment, coordination, and execution of the event—as well as affected stakeholders—to determine the causes, document those findings, and develop any necessary corrective actions. The Group Manager or FLM must notify the appropriate labor union representative(s) and invite them to participate in the SSR. Personnel must continually look for underlying issues beyond the initial "what" may have occurred and look for the "why" it occurred. All aspects of an event should be evaluated considering all contributing factors.

(1) The Technical Operations Services SSR Template, located in Appendix F, is based on the questions and required information in the safety database SSR Entry Form and is intended to assist management by providing a guide for preparing for and conducting a SSR. Only management can complete the SSR template and enter data in the safety database.

(2) Discussions with employees are an essential element used to gather information and gain an understanding about what occurred during the event under review. Employee participation is mandatory; however, discussions with any employee must be conducted in an atmosphere of shared concern that is designed to gain a better understanding about the operational environment. Any information obtained during such discussion should be used within the SSR process to aid in determining why the event occurred and identifying operational risk that may require mitigation.

(3) It is the responsibility of the Group Manager to ensure that the SSR process is

followed and within the prescribed timeframes. The SSR process consists of a preliminary review, discussion, and data entry.

(a) **Preliminary Review:** The FLM must perform a preliminary review in advance of the SSR discussion to collect information to develop an event summary that provides a short description of service being reviewed, the sequence of events, and operational impacts. This preliminary review may include, but is not limited to, log reviews, replays, and discussions with employees and stakeholders. The preliminary review should be a collection of basic facts only. The follow-on SSR discussion will be a comprehensive review of the event with involved personnel and affected stakeholders.

(b) **Discussion:** The Group Manager and FLM are responsible for completing the SSR discussion within seven calendar days of when they become aware of the subject NAS event, or sooner if requested by management at the directorate level. The discussion may be completed in person, via teleconference, via video conference, or via any combination that allows maximum participation of involved personnel and affected stakeholders.

i. The FLM has the responsibility to coordinate and schedule the SSR discussion and to include all personnel involved in the planning, risk assessment, coordination, and execution of the event. The FLM should also consider stakeholders affected by the event. The following should also be included in all SSR discussion invitations:

- Technical Operations Services Service Area Operational Safety Program Manager (SAOSPM).
- Service Center Quality Control Group (QCG) representative.
- Service Area Technical Services and Technical Services Center (TSC) management representative(s).
- Labor union representative(s).

ii. The Group Manager is responsible for facilitating the SSR discussion. The Group Manager is expected to open the discussion with an introduction to the subject event and the purpose of the SSR. The Group Manager is responsible for facilitating a productive conversation in a manner that avoids blame and confrontation and instead focuses on fact-finding around all aspects of the event. It is important that the Group Manager ensures full exploration of the event and guides the participants to discovering why the event occurred, identifying any potential systemic issues and corrective actions.

iii. Using the information collected in the Preliminary Review, the FLM is responsible for providing a summary of the event and then using the Technical Operations Services System Service Review (SSR) Template to guide the participants through the SSR discussion. The FLM is responsible for ensuring that all the required review categories in the template that are applicable to the SSR are thoroughly discussed in an effort to identify why the event took place, any potential systemic issues, and any necessary corrective actions.

(c) **Data Entry:** The FLM must enter the SSR in the safety database via the SSR Entry Form as a draft within seven calendar days of completing the SSR discussion. This should

include CAPs if corrective action is required. The draft SSR should document all identified issues and corrective actions. The FLM should attach all documents relied upon during the review. To maintain confidentiality, employee names or operating initials shall not be included. The Group Manager shall review the draft SSR for accuracy and completeness.

i. The FLM must close and publish the SSR in the safety database within 14 calendar days of conducting the SSR.

8-3. Technical Operations Services Systemic Issue Review (SYSIR). SYSIRs are a method to identify areas that have potential systemic impact, whether at the local, group, district, directorate, or headquarters level. An issue should be identified as potentially systemic if there is a probability for recurrence at the same location or elsewhere in the NAS. Personnel must continually look for underlying issues beyond the initial "what" that may have occurred and look for the "why." Asking "why" will help lead personnel to the initial identification of a systemic issue.

a. When a potentially systemic issue is identified and recorded during the SSR process, a SYSIR must be created. A SYSIR may also be created without conducting a SSR. It is important to provide a detailed and thorough description of the potential systemic issue so that reviewers can better understand the context of the issue.

b. The SYSIR process can identify and document systemic issues in the following categories:

- NAS systems and services.
- Coordination.
- Procedures/directives/documentation.
- Impact mitigation.
- Resource management.
- Training.

c. The FLM is responsible for creating and documenting the SYSIR in the safety database. If a potentially systemic issue is identified and recorded during the SSR process, a SYSIR will be automatically generated in the safety database, and then the FLM is responsible to document and complete the SYSIR. This should include CAPs if corrective action is required. To maintain confidentiality, employee names or operating initials shall not be included. The Group Manager is responsible for reviewing the SYSIR and determining the disposition ("Do Not Concur," "Concur," "Concur and Elevate").

d. The Technical Operations Services Systemic Issue Review (SYSIR) Template, located in Appendix F, is intended to assist users in preparing information and data for preparing an SYSIR, which then can be entered into the safety database. This template is based on questions and required information in the SYSIR function in the safety database.

8-4. Technical Operations Services Corrective Action Plan (CAP). CAPs are intended to document the corrective actions that will be used to address the operational safety deficiencies identified during a SSR or SYSIR. Corrective actions may include, but not be limited to,

changes to procedures, maintenance policy, implementation of new technologies, or training. CAPs must follow the appropriate safety assessment in accordance with SMS policy, if required.

a. CAPs may be initiated by Technical Operations Services management at the local, group, district, directorate, or headquarters level. CAPs can only be developed at the level of the organization empowered to correct (fix) the operational safety deficiencies and/or other risks to operational safety. To maintain confidentiality, employee names or operating initials shall not be included.

b. The FLM is responsible for creating and documenting the CAP in the safety database. A CAP can be created in the safety database by three methods: from a SSR, from a SYSIR, or from a stand-alone creation process. The benefit of creating a CAP through a SSR or SYSIR in the safety database is that a CAP will be automatically generated and the database will associate (link) the CAP with the SSR or SYSIR. For an automatically generated CAP, the FLM is responsible for documenting and completing the CAP.

c. The Technical Operations Services Corrective Action Plan (CAP) Template, located in Appendix F, is intended to assist users in preparing information and data for preparing a CAP, which can then be entered into the safety database. This template is based on questions and required information in the CAP function in the safety database.

d. The CAP must include the following required elements:

- Basic information.
- Identified safety risk or hazards.
- Background information.
- Pertinent regulations.
- Corrective action(s), including a targeted completion date, monitoring plan, and effectiveness target.
- Supporting data.

e. The FLM must ensure that all CAP actions are completed within the timeframes identified in the CAP itself. The Group Manager is responsible for monitoring the progress of the CAP and is responsible for reviewing and determining if all mitigations are implemented and if the effectiveness targets are met prior to closure. Once the CAP actions are complete, the FLM will recommend the CAP for closure, and the Group Manager must finalize the CAP in the safety database by closing it.

8-5. Technical Operations Services Compliance Verification (CV). The Air Traffic Organization uses CV to assess compliance with directives, policies, and procedures, and to identify areas for improvement. CV within Technical Operations Services is accomplished through the Internal Compliance Verification (ICV) process.

a. ICV. The purpose of an ICV is to identify latent safety issues through the verification of compliance with policy and procedures. The National Airspace System Technical Evaluation Program (NASTEP) accomplishes this task through the review of equipment used to provide

NAS services. NASTEP policies and procedures are identified in FAA Order JO 6040.6, *National Airspace System Technical Evaluation Program*.

Technical Operations Services ICVs are captured on the Integrated NASTEP Application (INA) website located at https://nastepweb.faa.gov/INA_By_Numbers/app/index.cfm.

Appendix B: Federal Contract Flight Service Station (FCFSS) Quality Control

This appendix outlines procedures for obtaining operational performance data and compliance verification processes for Federal Contract Flight Service Station (FCFSS) facilities only. For clarity, Service Provider (SP) refers to Leidos, and Service Delivery Point is in reference to the facility-level activities.

B-1. Operational Performance Monitoring.

a. Background. A key component in the delivery of air traffic services is personnel (Air Traffic Control Specialists, Flight Service Specialists, and Managers). Effective monitoring of the delivery of air traffic services will help ensure that those services are the safest and highest quality possible. All field managers at every level must effectively communicate performance expectations to their employees at the beginning of each rating cycle and subsequently measure and discuss their performance against these expectations. Data gathered through the following methods should be used to support overall SP performance. The processes and procedures described in this appendix are applicable to all FCFSS facilities.

b. OSA. A quality control OSA is a sampling method used to collect data by assessing the technical performance demonstrated by operational personnel for the overall evaluation of the facility. The purpose of this initiative is to ensure that the Flight Service Directorate staff and the SP have captured the facility performance at the service delivery point and that it is accurately reflected in the OSA.

(1) The Flight Service Directorate staff must document the results of the OSAs on the appropriate CEDAR FCFSS OSA 3120-26 Worksheet, if available.

(2) The SP uses the appropriate FAA Order JO 3120.4 OJT evaluation form (FAA Form 3120-26) as stipulated in FAA Order JO 3120.4 under conduct of performance assessments.

(3) Requirements for SP quality control OSA evaluation are outlined in the applicable paragraphs in FAA Order JO 7210.634, Chapter 3, Quality Control Monitoring, paragraphs 3-1 through 3-2.

NOTE–
Figure(s) 3-1 and 3-2 may be used as guidance for the conduct of SP conducted OSA requirements.

c. FAA Flight Service Directorate Responsibilities. The Flight Service Directorate will effectively monitor the SP performance requirements over the life of the contract. For FCFSS, the staff roles, responsibilities, and oversight are guided by processes and procedures contained within this order (inclusive of Appendix B), the Flight Service Directorate contractual requirements, and all applicable FAA orders.

(1) OSAs will be performed and analyzed on an as-needed basis as the means to conduct surveillance, auditing, sampling, data gathering, inspection, evaluation, and reporting. These activities will be accomplished at the discretion of the Flight Service Directorate.

Data Integrity

WHAT	WHY	HOW	WHAT TO LOOK FOR
QC OSA VALIDATIONS	QC data collected by facilities is the foundation for local, service area, and national compliance assessments and corrective actions. It is imperative that facilities accurately capture data collected in all quality control processes to ensure the effective identification of non-compliance/risk and associated CAPs. Validations require facilities to review specific data collection processes to ensure accurate documentation of facility performance.	Facilities must develop local sampling plans that include: • Target number of validations by week/month/quarter: Recommend facilities validate a minimum of 15% of all QC OSAs conducted each quarter. • Sampling method to ensure randomness and all sectors/positions are reviewed. • Replay tools to be used (radar AND voice where available). • Schedule that ensures data availability (within data retention time periods). • Feedback process to reviewers. • Follow-up process to ensure effectiveness of feedback. • Must be conducted collaboratively. • Must be documented in CEDAR.	• Compare demonstrated performance to documentation to ensure accuracy. • Note discrepancies. • Must only be used to identify organizational or systemic issues. Reminders: • Validations cannot negatively impact an employee's overall performance evaluation (previous IPM OSA). • Employees must not be decertified as a result of a Certification Skill Check validation.
CERTIFCATION SKILL CHECK/ PERFORMANCE ASSESSMENT VALIDATIONS	QC data collected by facilities is the foundation for local, service area, and national compliance assessments and corrective actions. It is imperative that facilities accurately capture data collected in all quality control processes to ensure the effective identification of non-compliance/risk and associated CAPs. Validations require facilities to review specific data collection processes to ensure accurate documentation of facility performance.	Facilities must develop local sampling plans that include: • Target number of validations by week/month/quarter: Recommend facilities validate a minimum of 15% of all Certification Skill Checks / Performance Assessments conducted each quarter • Sampling method to ensure randomness and all sectors/positions are reviewed. • Replay tools to be used (radar AND voice where available). • Schedule that ensures data availability (within data retention time periods). • Feedback process to reviewers. • Follow-up process to ensure effectiveness of feedback. • Must be conducted collaboratively. • Must be documented in CEDAR.	• Compare demonstrated performance to documentation to ensure accuracy. • Note discrepancies. • Must only be used to identify organizational or systemic issues. Reminders: • Validations cannot negatively impact an employee's overall performance evaluation (previous IPM OSA). • Employees must not be decertified as a result of a Certification Skill Check validation.
OJT DOCUMENTATION VALIDATIONS	QC data collected by facilities is the foundation for local, service area, and national compliance assessments and corrective actions. It is imperative that facilities accurately capture data collected in all quality control processes to ensure the effective identification of non-compliance/risk and associated CAPs. Validations require facilities to review specific data collection processes to ensure accurate documentation of facility performance.	Facilities must develop local sampling plans that include: • Sampling method to ensure randomness and all sectors/positions are reviewed (required target numbers already defined in QC order for OJTD Validations). • Replay tools to be used (radar AND voice where available). • Schedule that ensures data availability (within data retention time periods). • Feedback process to reviewers. • Follow-up process to ensure effectiveness of feedback. • Must be conducted collaboratively. • Must be documented in CEDAR.	• Compare demonstrated performance to documentation to ensure accuracy. • Note discrepancies. • Must only be used to identify organizational or systemic issues. Reminders: • Validations cannot negatively impact an employee's overall performance evaluation (previous IPM OSA). • Employees must not be decertified as a result of a Certification Skill Check validation.

(3) Airspace/airport, procedures, and equipment – the support manager for airspace and procedures.

9. QC Validation Sampling Plans. The support manager for QC and training is responsible for ensuring that all QC Validations are conducted in accordance with the following requirements.

a. OSA Validations.

(1) Generic ATCT/TRACON will validate a minimum of four OSAs per month. This target includes QC OSAs on all types of positions (CPC, FLM/CIC, TMC).

(2) OSA Validation samples should be randomly selected but must ensure that each sector/position is reviewed a minimum of once each six months.

(3) Radar sector/position OSA Validations must use Falcon with voice to review and compare demonstrated technical performance against that documented in the original OSA. Tower validations must use voice data to review and validate the OSA.

(4) Feedback. Systemic issues/trends identified through validations of OSAs will be forwarded to the support manager for QC and training for dissemination to personnel conducting OSAs.

(5) Follow-up. The support manager for QC and training must review OSA Validation findings for a time period to be defined to determine if previously identified systemic issues/trends have been resolved.

b. Certification Skill Check and Performance Assessment Validations.

(1) Generic ATCT/TRACON will validate a minimum of 20% of all Certification Skill Checks and Performance Assessments conducted per quarter.

(2) Certification Skill Check / Performance Assessment Validation samples must be randomly selected. Radar sector/position skill check / assessment validations must use Falcon with voice to review and compare demonstrated technical performance against that documented in the original Certification Skill Check / Performance Assessment. Tower validations must use voice data to review and validate the Certification Skill Check / Performance Assessment.

(3) Feedback. Issues identified through these skill check / assessment validations will be forwarded to the appropriate operations manager for feedback to the supervisor performing the original Certification Skill Check or Performance Assessment.

(4) Follow-up. The responsible operations manager is responsible for ensuring that identified issues are corrected.

c. OJT Documentation Validations.

(1) Validation samples for OJT documentation must be randomly selected.

Appendix E. Sample Fiscal Year (by Month) QC Activity Plan Large Tower / TRACON

October Facility Quality Control Activity Plan

(Example of one month of twelve)

QC AREA	ACTIVITY	#	WHAT	REQUIREMENT	REFERENCE
Data Collection	**QC OSA**	**21**	Conduct min. # QC OSAs	**61** per quarter	Facility OSA plan & FAA Order JO 7210.634
Data Collection	**ICV**	**0**	Complete % of facility ICV	Complete **25%/quarter**	Facility ICV plan & FAA Order JO 7210.634
Data Reviews	**QC OSA Subtasks/Emphasis Items**	**2**	Review OSA data to ID trends	Review OSA data –**2x/mo.**	Facility QC plan/order
Data Reviews	**MOR Data**	**2**	Review MOR aggregate data (by type/location) to ID trends	Review MOR data – **1x/mo.**	Facility QC plan/order
Data Reviews	**Barrier Analysis Data**	**1**	Review Barrier Analysis explanatory factor data/CSBR data	Obtain from SA QA or via dashboard/CEDAR – **1x/mo.**	Facility QC plan/order
Data Reviews	**ICV Data**	**1**	Review completed ICV checklist items & compare to OSA & MOR Data	Review completed checklists items – **1x/mo.**	Facility QC plan/order
Analysis	**SSR**	**4+**	• Conduct random/scheduled SSRs • Assess potential trends identified in Data Reviews • Conduct post-event for all red/yellow event (non-accident)	• Random/scheduled – **4x/mo.** • Post-event and to assess potential trends - **as necessary**	Facility SSR plan, FAA Order JO 7210.634, and FAA Order JO 1030.3
Analysis	**CER**	**TBD**	Conduct post-accident CERs	Conduct after **ALL fatal accidents with ATC services**	FAA Order JO 1030.3 & FAA Order JO 7210.634
Analysis	**TMR**	**2+**	• Conduct random/scheduled • Conduct after significant delay and special events	• Random/scheduled – **2x/mo.** • After significant delay and special events – **as necessary**	Facility TMR plan & FAA Order JO 7210.634
Analysis	**SYSIR**	**TBD**	Conduct SYSIRs on all potential systemic issues flagged through OSAs, Service Reviews, and CSBR	Conduct – **as necessary**	FAA Order JO 7210.634
Data Integrity	**OSA Validation**	**7**	Validate min. # OSAs each month	Validate min. **7 OSAs/mo.**	Facility QC plan & FAA Order JO 7210.634
Data Integrity	**Cert Skill Check and Performance Assessment Validation**	**7**	Validate min. # Cert Skill Checks / Performance Assessments each month	Validate min. **7 cert. skill checks/performance assessments/mo.**	Facility QC plan & FAA Order JO 7210.634
Data Integrity	**OJT Validation**	**5**	Validate min. # OJT forms each month	Validate min. **5 OJT forms/mo.**	Facility QC plan & FAA Order JO 7210.634

QC AREA	ACTIVITY	#	WHAT	REQUIREMENT	REFERENCE
CAPs	**Review CAPs generated from Service Reviews, CVs, and CSBR**	**1**	NEW – ensure contains ALL elements/review monitoring plan	Review min. **1x/mo.** or as CAPs are created	Facility QC plan
CAPs	**Review CAPs generated from Service Reviews, CVs, and CSBR**	**1**	OPEN – review monitoring data/assess mitigation performance	Review min. **1x/mo.**	Facility QC plan
CAPs	**Review CAPs generated from Service Reviews, CVs, and CSBR**	**1**	CLOSED – ensure effectiveness target met	Review min. **1x/mo.** or as CAPs are closed	Facility QC plan
Reports	**Facility Safety Report**	**1**	Produce monthly safety report	Publish facility safety report **1x/mo.**	Facility QC plan

Appendix F. Technical Operations Services SSR, CAP, and SYSIR Templates

This appendix contains templates for Technical Operations Services SSRs, CAPs, and SYSIRs based on the questions and required information in the safety database. It is intended to assist users in preparing information and data for entering results into the safety database. The current safety database is the Comprehensive Electronic Data Analysis and Reporting (CEDAR) tool located at https://cedar.faa.gov.

F-1. Technical Operations Services System Service Review (SSR) Template.

* Indicates required item

Review Categories	Response	Explain
Preliminary Data:		
Date, Start and End Time (UTC) (of Event)*.		
Short Description (of Event)* *e.g. event summary that provides a short description of event being reviewed, sequence of events, and operational impacts.*		
Additional Information:		
FSEP Facility Type, FSEP Facility ID.*		
Location (City, State)*		
RMLS Data:		
RMLS Log ID*		
NAS Systems and Services:		
Were any equipment issues identified?* **If Yes:**		
Was there any maintenance occurring (PM's, Correctives, Mod's, Troubleshooting, etc.)?*		
(Whether response to previous question is Yes or No, the following 3 questions require date selection)		
When was the last PM completed? *[Date]**		
When was the last certification completed? *[Date]**		
When was the last unscheduled outage? *[Date]**		
Were any telecommunications issues identified?*		
Did any TPR issues or trends exist?*		
Was any service degradation identified prior to the event?*		
Were there any system modification issues?*		
Were there any maintenance alert issues (not completed, expired, etc.)?*		
Were any adaptation issues identified?*		
Were any airspace and procedure issues identified?*		
Did diversity, redundancy, or back-up system issues exist?*		

Review Categories	Response	Explain
Were any potential systemic NAS system and/or service issues identified?* *(Note: probability for recurrence at the same location or elsewhere in the NAS)*		
Coordination:		
Were any coordination issues identified?* **If Yes:**		
Was coordination (pre, final, and post) properly completed with all customers and stakeholders?*		
Could coordination or communication with stakeholders have been improved?*		
Was a NOTAM issued?*		
Were any potential systemic coordination issues identified?* *(Note: probability for recurrence at the same location or elsewhere in the NAS)*		
Procedures/Directives/Documentation:		
Were any procedural, directive, or documentation issues identified (local, service area, or national)?* **If Yes:**		
Were personnel unfamiliar with the application of the procedure or directive?*		
Were any issues identified with any other reference documentation or technical drawings?*		
Were any potential systemic procedural/directive/documentation issues identified?* *(Note: probability for recurrence at the same location or elsewhere in the NAS)*		
Impact Mitigation:		
Were any Safety Risk Management and Operational Risk Management (e.g. IRMC) issues identified?*		
Were there recently similar outages or trends?*		
Were any contingency plan issues identified?*		
Did anything delay service or system recovery?*		
Was fatigue an issue?*		
Were any potential systemic impact mitigation issues identified?* *(Note: probability for recurrence at the same location or elsewhere in the NAS)*		
Resource Management:		
Were any resource management issues identified?* **If Yes:**		
Did any supervision or technical oversight issues exist (FLM, DFM, or SSC Coordinator)?*		
Were any issues with operational coverage identified?*		
Were any potential systemic resource management issues identified?* *(Note: probability for recurrence at the same location or elsewhere in the NAS)*		

Review Categories	Response	Explain
Training:		
Were any training issues identified?* **If Yes:**		
Was training in progress at the time of the event?*		
Were any potential systemic training issues identified?* *(Note: probability for recurrence at the same location or elsewhere in the NAS)*		
Stakeholder and Customer Feedback:		
Was there any stakeholder or customer feedback?* **If Yes:**		
Did the feedback express praise?*		
Did the feedback express concern?*		
Was the feedback validated?*		
Individual Performance:		
Was any notable individual performance identified?* (Exemplary and/or needing improvement) **If Yes:**		
Where was individual performance identified?* **Facility Type:*** *[Drop Down: Navigational, Communications, Surveillance, Weather, Environmental, Control Center]* **Maintenance Organization:*** *[Drop Down: SSC, Control Center, Technical Support, Engineering Services, Contractor]*		
ATSAP/TSAP filed?		
Supporting Data:		
Add Attachment: *[Drop Down: Falcon Bookmark, Airborne Replay, Surface Replay, Voice Recording, Other]*		
Findings and Corrective Actions:		
Is corrective action required?* **If Yes:**		
Corrective Action:* *[Link: Create CAP]*		
QC Comments:*		
Forward:		
Recipient: [Select Name] (Note: Can add multiple recipients)		
[] Send as Informational []Delegate []Cancel		
Comments:		

F-2. Technical Operations Services Corrective Action Plan (CAP) Template.

* Indicates required item

Basic Information:		
Subject of CAP:*		
Safety Monitoring Watchlist:		
Identified Safety Risk or Hazard:		
Risk or Hazard:*		
Background Information:		
Detailed Description of Validated Safety Issue(s):*		
Pertinent Regulations:		
Add Regulation:		
Order/Directive Number: *[Drop Down: 6000.15, 7110.65, 7210.3, Other]*	**Reference:**	**Description:**
Corrective Action Plan:*		
Corrective Action #1: *(Note: More than one corrective action can be added in the safety database)*		
Type:* *[Drop Down: Briefing, Review, Airspace, Directive, Procedure, Equipment, Training, Other]*	**Level:*** *[Drop Down: Headquarters, Service Area, District, Facility]*	**Target Completion Date:***
Details:*		

Monitoring Plan:*		
Monitoring Item #1:		
Type:* *[Drop Down: Review]*	**Level:*** *[Drop Down: Headquarters, Service Area, District, Facility]*	**Target Completion Date:***
Details:*		
Effectiveness Target:*		
Supporting Data:		
Attachment Type: *[Drop Down: Falcon Bookmark, Airborne Replay, Surface Replay, Voice Recording, Other]*		
Forward:		
Recipient: [Select Name] (Note: Can add multiple recipients)		
[] Send as Informational []Delegate []Cancel		
Comments:		

F-3. Technical Operations Services Systemic Issue Review (SYSIR) Template.

* Indicates required item

Date:
Systemic Issues:
Select the type of systemic issue identified:*
[Drop Down: NAS Systems and Services, Coordination, Procedural/Directive/Documentation, Impact Mitigation, Resource Management, Training]
Systemic Issue:*
Add Attachment (.xls, .xlsx, .doc, .docx, .pdf, .png, .jpg, .gif):
Enter Specific Details:*