

Title: Development of Industry Standardized Web-based Auditing/Surveillance Tool to Minimize Maintenance Prior to Dispatch by Airlines

Sponsor Organization: AFS

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Research Statement:

Develop existing PC /paper based auditing/surveillance tool to web-based application in performing auditing/surveillance/monitoring and validation of oversight of maintenance to ensure a consistent level of oversight is maintained. This system can proactively identify contributing factors of improper maintenance before aircraft is dispatched once work is complete. In addition, portions of this web-based surveillance/auditing tool can be used by aircraft manufacturers before delivery of aircraft to their customers.

Background:

Several attempts have been made by FAA and industry to standardize error mitigation tools. Industry typically revises these tools to meet their own organizations' system, hence trending data across industry is difficult. Recently NTSB and a large manufacturer expressed interest in developing an existing PC and paper-based process used by large air cargo company to a web-based application. This web-based tool will help airlines, repair stations, air cargo, and manufacturers ensure compliance with FAA approved Continuous Airworthiness Maintenance Program. Development of this web-based application is to promote an environment of continuous improvement and team work by performing and documenting a variety of intentional and systematic surveillance oversight activities/inspections that make sure FAA regulations, airline, air cargo, and repair stations policies and procedures, and aircraft manufacture's maintenance procedures are complied with. This oversight is to insure that each aircraft dispatched is safe, airworthy, reliable and regulatory compliant. The web-based surveillance tool should incorporate findings from the following: a) In Process Surveillance, b) Verification Surveillance, c) Final Walk Around, d) Aircraft Walk Around, e) Quality Control, f) Inspection, g) Technical Data Control, h) Shelf Life Control, i) Tool/Test Equipment, j) Housing & Facilities, k) Safety/Security/Fire Protection, l) Storage, m) Work Processing, n) GMM Compliance, o) IPM Compliance, p) Fuel Surveillance, q) Description/Findings, r) Corrective Action/Follow up, s) Monitoring changes to and the accuracy of maintenance personnel, verifying that additions and recurrent training meet the requirements, and t) Airworthiness Directive Verification.

Output:

De-identified web-based auditing/surveillance tool to be used by airline industry, air cargo, repair stations, manufacturers, and FAA. Results of surveillance and monitoring will correct or improve performance deficiencies. Findings can be shared by manufacturers, airlines, repair stations and air cargo's to help identify and prioritize factors that transcend across industry to foster elimination of these types of errors that are contributors/precursors and could systematically eliminate or reduce potential errors. Development of web-based system will meet Certification Process Study Finding 1 and Certification Process Implementation (CPI) Plan. Development of web-based system should be completed by December 2003 to meet goals of Certification Process Implementation (CPI) Action Plan. In addition, results of surveillance could be used to proactively disseminate lessons learned to industry and enable air carriers, manufacturers, air cargo and repair stations to identify potential errors when performing maintenance.

Regulatory Link:

Certification Process Study