

DOT/FAA/CT-94/121
FAA Technical Center
Atlantic City International Airport,
N.J. 08405

FAA Technical Center System Security Technology Program Safety Analysis Project Plan

Ronald R. Polillo

FEDERAL AVIATION ADMINISTRATION
TECHNICAL CENTER LIBRARY
ATLANTIC CITY INT'L ARPRT, NJ 08405

December 1994

Final Project Plan

This document is on file at the Technical Center Library,
Atlantic City International Airport, NJ 08405.



U.S. Department of Transportation
Federal Aviation Administration

DOT/FAA
/CT-94/
121

00014609

NOTICE

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The U.S. Government assumes no liability for the contents or use thereof.

The United States Government does not endorse products or manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the objective of this report.

1. Report No. DOT/FAA/CT-94/121		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle FAA TECHNICAL CENTER SYSTEM SECURITY TECHNOLOGY PROGRAM: SAFETY ANALYSIS (SA) PROJECT PLAN				5. Report Date December 1994	
				6. Performing Organization Code ACA-400	
7. Author(s) Ronald Polillo				8. Performing Organization Report No. A-2001005-94-U-10047	
9. Performing Organization Name and Address U.S. Department of Transportation Federal Aviation Administration Technical Center Aviation Security Research and Development Service, ACA Atlantic City International Airport, NJ 08405				10. Work Unit No.	
				11. Contract or Grant No. DTFA03-93-C-00042	
12. Sponsoring Agency Name and Address U.S. Department of Transportation Federal Aviation Administration Assistant Administrator for Civil Aviation Security, ACS-1 800 Independence Avenue, S.W. Washington D.C. 20590				13. Type of Report and Period Covered Final Project Plan	
				14. Sponsoring Agency Code ACS-1	
15. Supplementary Notes:					
Report Prepared by: DCS, Inc. 2511 Fire Road, Suite A-5 Absecon, NJ 08201 Robert Baker, DCS, Inc. Howard Spencer, DCS, Inc.					
16. Abstract					
The Safety Analysis (SA) Plan details the type and level of effort necessary to discover the inherent hazards and evaluate the level of risk of ACA research activities. Literature reviews, interviews and inspections will be used to develop the data. Deliverables will include audit reports, Standard Operating Procedures (SOPs), checklists, Job Safety Analysis (JSA) worksheets and a Project Report. A recommended classification scheme will be developed to assist in prioritizing suggested corrective actions.					
17. Key Words			18. Distribution Statement		
Hazard Assessment, Job Safety Analysis, Risk Analysis			This document is on file at the Technical Center Library, Atlantic City International Airport, NJ 08405		
19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price		
Unclassified	Unclassified	22			

TABLE OF CONTENTS

EXECUTIVE SUMMARY	v
1. INTRODUCTION	1
1.1 PURPOSE	1
1.2 BACKGROUND	1
1.3 SCOPE	1
1.4 APPROACH	1
2. MAJOR ANALYSIS ACTIVITIES	1
3. PROJECT RESOURCE SUPPORT	3
3.1 ORGANIZATIONAL SUPPORT	3
3.2 SPECIALIZED SUPPORT	3
3.3 EQUIPMENT	3
3.4 SAFETY AND SECURITY SUPPORT	3
4. PROJECT MANAGEMENT	3
4.1 PROJECT MANAGER	3
4.2 PROJECT TECHNICAL LEAD	4
5. PROJECT SCHEDULE	5
5.1 IDENTIFY SAFETY & HEALTH ROLES AND RESPONSIBILITIES ...	7
5.2 DETERMINE RELATIONSHIP BETWEEN FAATC SAFETY AND ACA MANAGEMENT	7
5.3 IDENTIFY ACA ORGANIZATIONAL ACTIVITIES	8
5.4 RESEARCH APPLICABLE REGULATIONS	8
5.5 DEVELOP SAFETY REVIEW AN ANALYSIS PROCESS	9
5.6 COMPLIANCE OF TEST PLANS WITH GUIDELINES	10
5.7 ANALYZE TEST S&H PLAN IMPLEMENTATION	10
5.8 DEVELOP SAFETY & HEALTH AUDIT CHECKLISTS	11
5.9 AUDIT IN-PROGRESS TEST ACTIVITIES	11
5.10 RISK ANALYSIS OF IN-PROGRESS AUDIT RESULTS	12
5.11 CONDUCT ACA WIDE S&H AUDITS	12
5.12 RISK ANALYSIS OF AUDIT RESULTS	13
5.13 EVALUATE SOC ACTIVITIES	13
5.14 IDENTIFICATION OF TRAINING STATUS	13
5.15 PREPARE PROJECT REPORT	14

LIST OF ACRONYMS AND ABBREVIATIONS

ASL	Aviation Security Laboratory (Building 315)
CHP	Chemical Hygiene Plan
CSO	Center Safety Office
CTS	Cumulative Trauma Syndrome
DT&E	Developmental Test and Evaluation
FAATC	Federal Aviation Administration Technical Center
ISQAT	Internal Safety Quality Action Team
JSA	Job Safety Analysis
LOTO	Lock-Out, Tag-Out
MAPC	Mitigation Action Prioritization Criteria
OT&E	Operational Test and Evaluation
PPBM	Positive Passenger Baggage Matching
R&D	Research and Development
RMI	Repetitive Motion Injury
S&H	Safety and Health
SA	Safety Analysis
SOC	Safe Operations Committee
SOP	Standard Operating Procedure
SOW	Statement of Work

EXECUTIVE SUMMARY.

This project consists of fifteen separate, distinct, but related activities. It starts with a review of the ACA organization's safety and health management functions. An assessment will be made of the support available within the Center Safety Office (CSO) and a review of regulatory requirements will be performed. A Standard Operating Procedure (SOP) will be developed which will describe a review process for evaluating the safety of future test activities, and will assign administrative responsibility to a Safe Operations Committee (SOC).

Next, ACA activities will be assessed for inherent hazards and existing programs which have been established to address safety and health will be assessed. To evaluate potential exposures a preliminary audit will be performed. The results of this audit will be integrated with the above findings to develop a series of checklists to be used in ACA wide audits. The data gathered by the various activities will be analyzed and a project report prepared which details the recommended program enhancements.

1. INTRODUCTION.

1.1 PURPOSE. The purpose of this project is to develop an organizational process to systematically identify any safety or health hazards or concerns involved in general laboratory operations and in test-specific operations both in the laboratory and field environments. A risk analysis of any identified safety and health risks to test personnel, equipment operators/maintainers, and the flying public will be performed to evaluate the risk level and make recommendations to mitigate such risks.

1.2 BACKGROUND. The Aviation Security R&D Service (ACA) is responsible for the test and evaluation of explosive detection systems, airport and air carrier security systems, and aircraft hardening R&D. In the performance of these tasks, ACA operates several on-site laboratory facilities and conducts equipment tests both on and off site. The ACA Safety Manager plans to conduct a systematic, comprehensive safety analysis of these activities to ensure that any safety and health risks posed by such activities to test participants, equipment operators, and the general public both on-site and off-site are addressed.

1.3 SCOPE. This comprehensive safety analysis will cover ACA laboratory and test operations including those performed at off-site locations. The integration of ACA safety activities with other FAATC organizations will be addressed only to the degree necessary to identify any functional safety support relationships.

1.4 APPROACH. DCS will develop a safety analysis plan describing the process for conducting a safety analysis and identifying the personnel involved in the process. The plan will identify the scope and specific levels of safety review and risk assessment, the management and technical personnel who should be involved in the review, and will include the process for obtaining a pre-test safety analysis or special analysis based on changing test equipment or unique circumstances. The individual steps in the process will be described, the specific documentation to be reviewed will be identified, the procedure for obtaining a risk assessment, and for getting urgent safety assistance will be identified. The plan will be submitted to the ACA-400 Safety Manager for review and approval.

2. MAJOR ANALYSIS ACTIVITIES.

This section summarizes the research activities that will be performed during this project.

- a. Identify the health and safety roles and responsibilities of line and functional management at all organizational levels within the Aviation Security R & D Service (ACA);

- b. Determine the role and functional relationship of the FAATC Safety and Health Manager to ACA safety management;
- c. Identify ACA organizational activities that may pose safety and health hazards or are recognized areas of employee safety and health concern;
- d. Research federal safety regulations and industry standards to determine their applicability to ACA organizational activities;
- e. Develop safety review and analysis process;
- f. Develop check lists for conducting safety and health (S&H) audits of applicable ACA activities;
- g. Conduct S&H audits of ACA laboratory facilities and support activities;
- h. Conduct a risk analysis of the laboratory S & H audit results and recommend specific mitigation actions in the project report;
- i. Conduct S&H audits of on-site, in-progress equipment testing activities;
- j. Conduct a risk analysis of the in-progress equipment testing S&H audit results and recommend specific mitigation actions in the project report;
- k. Review SOPs and operations to ensure coverage of all major areas of safety and health concern;
- l. Review implementation of Test Plans for compliance with their respective S&H Test Plan requirements. Identify and document areas of non-compliance;
- m. Evaluate the implementation of the SOC recommended in "e" above. Determine if all risks are identified and evaluated;
- n. A new research activity will identify and consolidate the required S&H training activities discovered in d above. It will then determine the present status of S&H training activities within ACA. Recommendations to bring activities into compliance will be included in the Project Report; and
- o. Prepare a comprehensive safety and health risk analysis report identifying organizational, operational, administrative safety and health problems and recommendations for addressing such problems. This report will also suggest a priority scheme for correction of the S&H risks identified based on the potential risks involved.

3. PROJECT RESOURCE SUPPORT.

3.1 ORGANIZATIONAL SUPPORT. Management support at all organizational levels will be essential to accomplishing this analysis in an efficient manner. Discussion with individual managers relative to their operational and safety responsibilities will be necessary to identify the organizational and operational safety concerns to be addressed. Their existing safety plans and procedures will have to be reviewed and understood. Their attendance at safety coordination meetings will be necessary from time-to-time.

3.2 SPECIALIZED SUPPORT. Employees with specialized knowledge of laboratory and testing operations will be needed to support the analysis effort. These employees will provide expertise in highly specialized work areas involving explosives, chemicals, and hazardous materials.

3.3 EQUIPMENT. Specialized measurement equipment may be necessary to determine if regulatory safety thresholds are surpassed in some cases. Such thresholds exist in reference to employee exposure to noise, hazardous chemicals/vapors, and radiation.

3.4 SAFETY AND SECURITY SUPPORT. Appropriate safety equipment must be provided for those involved in safety assessment activities. Unescorted, routine access to laboratory and test activities will be needed during on-site and off-site safety assessment and analysis activities.

4. PROJECT MANAGEMENT. The ACA Safety Officer will provide overall supervision and direction of the safety analysis effort. He may designate an ACA staff member as the technical lead on the project to handle day to day activities.

4.1 PROJECT MANAGER. The manager of the Requirements Analysis and Integration Division (AC-400) of the FAA Technical Center's Aviation Security Research and Development Service has been designated to serve as the Service Safety Officer and as such will serve as the Project Manager. This individual will be responsible for:

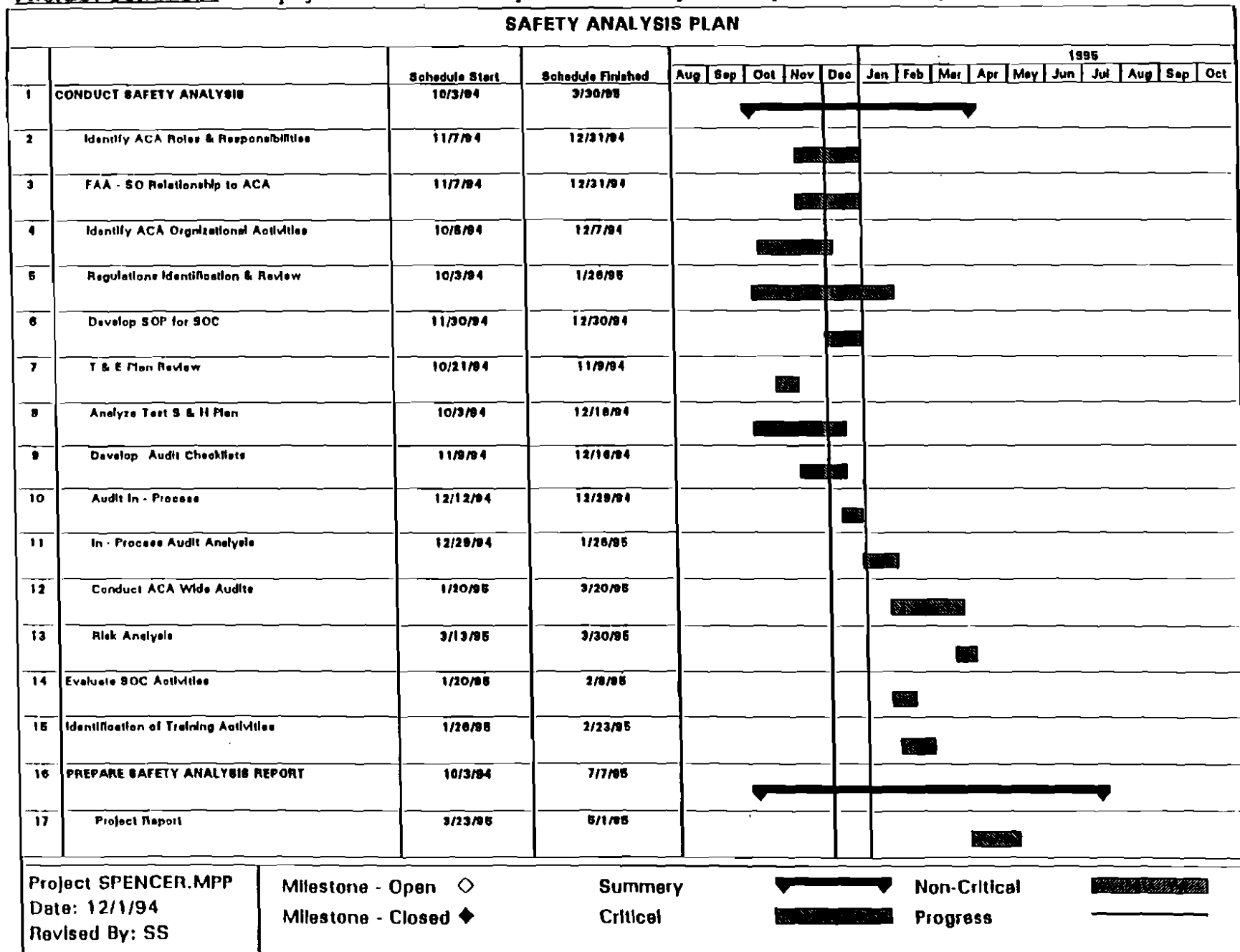
- a. Meeting goals and objectives of the safety requirements document;
- b. Leading the project planning efforts and defining resource requirements;
- c. Reviewing all deliverables for conformity to FAA quality standards;

- d. Conducting periodic review sessions to discuss project status and resolve any identified project problems;
- e. Revalidating the approved customer requirements statement at major program milestones;
- f. Providing management leadership and supervision to keep the program operating consistent with DOT/FAA statutes, regulations, orders, policies and procedures;
- g. Ensuring that all personnel and related resources necessary to address program requirements are made available; and
- h. Holding project team members accountable for program accomplishment within time and budget constraints.

4.2 PROJECT TECHNICAL LEAD. A staff member within ACA-400, Requirements Analysis and Integration Division will serve as the Project Technical Lead. This individual reports to the Project Manager on technical matters and is responsible for all aspects of project accomplishment including:

- a. Handling all technical project issues and complying with reporting requirements;
- b. Overseeing the project technical direction;
- c. Participation in project budget submissions and justifications;
- d. Planning and scheduling FAA Technical Center Project Team sessions briefings to assess progress, and making technical project decisions;
- e. Controlling and distributing all project documentation for program approval or technical reference; and
- f. Supporting technical reviews.

5. **PROJECT SCHEDULE.** The project schedule will identify the time necessary to accomplish the entire analysis effort and each major task.



SAFETY ANALYSIS PLAN

		Schedule Start	Schedule Finished						1995									
				Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
19	FAA Review	6/2/95	6/19/95															
19	Final Report	6/20/95	7/7/95															
20	Implementation Update & Ongoing (TBD)	10/3/94	10/3/94															

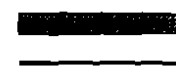
Project SPENCER.MPP
Date: 12/1/94
Revised By: SS

Milestone - Open ◇
Milestone - Closed ◆

Summary
Critical



Non-Critical
Progress



5.1 IDENTIFY SAFETY & HEALTH ROLES AND RESPONSIBILITIES. This research activity will describe the roles and responsibilities of line and functional management with regard to S&H activities. First, it will identify the position titles (including incumbent name), their reporting arrangement, authority levels, accountability for specific S&H activities, e.g., chair safety committee, perform incident investigations, etc. It will summarize those duties established in the existing Safety and Health Plans and SOP's. Second, it will seek to:

- a. Identify those informal links between line and staff;
- b. Highlight personnel with special safety knowledge; and
- c. Identify other resources within the ACA organization where safety assistance can be obtained. (Resources external to ACA will be identified in *paragraph 5.2.*).

Findings will be included in the project report in a standard organizational chart with a narrative summary of the duties and authority levels and recommendations, if any, resulting from an analysis. For example, if an inconsistency is identified between accountability for results and authority to accomplish them, a recommendation to raise authority levels may be prudent.

5.2 DETERMINE RELATIONSHIP BETWEEN FAATC SAFETY AND ACA MANAGEMENT. This research activity involves interviews with the FAATC safety manager and/or staff personnel to gain an understanding of their role in relation to the ACA Safety Officer, as well as the services available through this office. The procedure for obtaining urgent safety assistance from FAATC Safety will be identified.

Information will be requested on ACA and Center incidents, including injury and property damage trends that may assist in identifying potential problem areas within ACA. The project report will include a narrative summary of the above interviews and also describe resources/capabilities of the safety office such as:

- a. Reference materials (regulations, orders, standards)

NOTE: these documents are reviewed in *paragraph 5.4.*;
- b. Training materials (packages, films, videos);
- c. Specialized equipment capabilities (IH instrumentation);
- d. Unique skills or knowledge (incident investigation, etc); and
- e. Scheduled TC program enhancements.

Where new center wide programs or activities are identified which hold the potential for assisting ACA in improving their S & H activities, these plans/activities will be summarized in the project report and the anticipated time given. These new Center activities, programs and plans will be assessed for their impact on ACA activities. Those which require additional ACA action will be identified.

5.3 IDENTIFY ACA ORGANIZATIONAL ACTIVITIES. The purpose of this research activity is to identify potentially hazardous activities within ACA.

- Step one: Will involve interviews with the ACA Test Director, ASL Director and Program Technical Leads and review of project schedules and other pertinent documentation to develop a list of activities.
- Step two: Will group these activities by organizational section. Activities will be further broken down into specific activities within the organizational entity. This breakdown will be shown in a tree type diagram.
- Step three: Will involve review of the Statement of Work (SOW) for principal research personnel to determine recognized potential exposures such as the need to wear a respirator during chemical handling. Updating the SOW's to reflect findings of this sub-section could be a recommendation.
- Step four: To identify principle hazards, if not intuitively obvious, a Job Safety Analysis (JSA) will be performed for each of the major tasks identified in step one. The JSA worksheets will be included as Appendix A in the project report.

5.4 RESEARCH APPLICABLE REGULATIONS. Identifying the applicable federal safety regulations and existing FAA orders implementing these requirements is a primary concern of this project. This research activity will reduce the likelihood of recommending the development of additional requirements when existing FAA or FAATC orders may only need to be identified, updated or supplemented. For example, CT 3900.24, implements OSHA within FAATC and requires written S & H plans for work involving hazardous test operations. OSHA plans include:

- a. Chemical Hygiene Plan;
- b. Respiratory Protection Procedure;
- c. Employee Emergency Action (Evacuation) Plan; and
- d. Exposure Control Plan.

In some cases, the activity(s) identified in *paragraph 5.3 above*, may require a supplement to an existing FAA or FAATC orders for clarification. In other cases the activity may be unique to ACA and no existing order adequately covers it. Then a new ACA Level Directive would have to be written using Federal standards or consensus documents as a guide.

Some FAATC orders may be guidelines in the form of a Center Safety Manual. During review of these, the need for an ACA "Safety Manual" will be assessed. If a specific manual is needed it will be recommended.

5.5 DEVELOP SAFETY REVIEW AN ANALYSIS PROCESS. This research activity will combine the results of previous tasks to formulate a detailed description of a process for the prior safety review of proposed research work. This will involve three steps and two deliverables.

First, the process should address all testing whether done on FAA sites or at off-site locations. It will include steps to analyze the safety of the following broad scope of ACA activities.

- a. General Laboratory Operations (routine operations);
- b. Technology Feasibility Studies;
- c. Evaluation of Detection Technology on Threat Articles;
- d. Prototype Equipment Evaluations;
- e. FAATC Test Operations (Operational Demonstrations); and
- f. Evaluation of new threat articles or technology.

Second, the additional steps need to evaluate and demonstrate the safety of equipment and operations for the various populations involved in the full range of testing done during any phase of the activities identified in step one, will be developed. These populations include:

- a. Testers;
- b. Equipment Operators (field Locations);
- c. Maintenance Personnel; and
- d. The Flying Public.

Third, a charter, for a permanent Safe Operations Committee (SOC) to review and approve both DT&E and OT&E Plans will be developed.

The first deliverable is a flow chart describing the process and the second is a draft SOP detailing the review steps, list of duties, and a list of suggested participants described by function. The SOC will become responsible for administering the requirements of the SOP.

5.6 COMPLIANCE OF TEST PLANS WITH GUIDELINES. Test and Evaluation Plans are required to conduct any developmental or operational test activity. The test-specific Safety & Health Plan specifies the precautions to be taken during the test. Test operators must comply with these safety guidelines by developing, validating and implementing Standard Operating Procedures (SOP's) for critical test tasks. This research activity involves several steps.

- a. Existing SOP's will be reviewed for compliance with applicable S&H Test Plan guidelines and FAATC Safety Orders;
- b. Test operations will be reviewed to ascertain if they conform to the SOP's; and
- c. A determination will be made regarding the need to create additional SOP's for identified critical tasks.

5.7 ANALYZE TEST S&H PLAN IMPLEMENTATION. This research activity involves an analysis of the implementation of test unique safety and Health Plan requirements, including but not limited to those for bulk and trace testing.

First, determine if the S&H plans as they are implemented address all critical concerns, including:

- a. The process for obtaining a pre-test safety analysis based on changing equipment or unique circumstances; and
- b. Identifying the scope, specific levels of review, and the management/technical personnel involved.

Second, report deficiencies found to the ACA Safety Officer to expedite corrective action. The status of corrective action will be shown in the project report.

Third, a qualitative determination of the level of risk will be developed for noted deficiencies and used as a model for a "Mitigation Action Prioritization Criteria" (MAPC).

5.8 DEVELOP SAFETY & HEALTH AUDIT CHECKLISTS. After identifying those activities in ACA that pose an actual or perceived exposure, (list from *paragraph 5.3*) and identifying the applicable regulations (*paragraph 5.4*), a series of checklists will be prepared to systematically locate and document safety and health risks. Checklists will cover as a minimum:

- a. Electrical Hazards (labeling, grounding, LOTO);
- b. Physical Hazards (fire, pressure & temperature extremes);
- c. Mechanical Hazards (guarding and power transmission);
- d. Explosive Hazards;
- e. Chemical Hazards (splash, toxicity, reactivity);
- f. Material Handling and storage;
- g. Ergonomic Exposures (lifting, RMI, CTS, etc.);
- h. Environmental Hazard (spill, release);
- i. Radiological Hazards (ionizing and non-ionizing); and
- j. Document Review (CHP, Evacuation Plan, Respirator, etc).

The checklist will identify the specific safety hazards in laboratory or test operations, provide space to describe the function or location, and may include the relevant regulation or order citation. These checklists will be used when conducting the audits described in *paragraphs 5.9 and 5.11*, and can later be used within ACA for periodic audits. Copies of the checklists will be included as Appendix B of the project report.

5.9 AUDIT IN-PROGRESS TEST ACTIVITIES. This research activity involves performing a preliminary audit of the testing activities that are in progress within ACA on-site labs, such as, EDS testing and PPBM. This activity has three purposes:

- a. Provide an immediate "snap-shot" of current operations to assess the presence of uncontrolled exposures or imminent danger conditions. Recommendations will be transmitted to ACA management in draft form only, for those items needing immediate corrective action. Mitigation activities can then be implemented where necessary;

- b. Review of the implementation process can provide valuable feedback on and a model for analysis, to help find potential bottlenecks, as requests for corrective action move through the management structure. The successful implementation of recommendations will assure that in-progress work is proceeding in a generally recognized safe manner; and
- c. It will serve as a dry run of the audit techniques and allow the checklists to be modified and then validated.

5.10 RISK ANALYSIS OF IN-PROGRESS AUDIT RESULTS. This research activity involves a review and analysis of the results of the preliminary audit performed as *paragraph 5.9* and is essentially similar to activities that will be performed for risk analysis, described in *paragraph 5.12* only on a smaller developmental scale. This activity will define and refine techniques and validate the report format that will then be used for the ACA wide audit results in the project report.

Audit recommendations will most likely, include as detailed information as is readily obtainable to quantify the location (building number, pillar number, piece of equipment name, FAA ID number or activity) to aid in identifying the location where corrective action is required. Reference may also be made to the general section of applicable regulations or the implementing order can be cited where applicable.

This will assist in the development and validation of the MAPC activities discussed in *aragraph 5.7*.

5.11 CONDUCT ACA WIDE S&H AUDITS. This research activity consists of conducting S&H audits of ACA facilities and laboratory activities. The S&H audit checklists developed in accordance with *paragraph 5.8* detailed coverages will be used to systematically survey for and identify potential safety and health risks.

Area supervision will be contacted at the time of the survey, given a general overview of the audit purpose and invited to accompany the auditor(s). Requirements will be explained on a need-to-know or as requested basis to foster cooperation, rapport and understanding. Findings that can be immediately corrected, e.g., poor housekeeping and reported as a corrected item(s) will be handled in that manner.

The ACA Safety Officer will be briefed throughout the course of this audit on any imminent danger situations uncovered. The result of this audit will be summarized in the project report.

When it is learned that off-site testing is in progress, a determination of potential risk will be undertaken, based on the nature of the testing, review of the test plan, the personnel involved and the location of the test. Where warranted audits will be conducted of off-site activities.

5.12 RISK ANALYSIS OF AUDIT RESULTS. This research activity involves review, consolidation and ranking of the audit findings from *paragraph 5.11* (ACA wide). The project report will group recommendations as follows:

- a. General ACA wide first, with reference to a few specific findings of similar conditions; and
- b. A "worst-first" listing resulting from application of the MAPC, sub-divided according to areas of functional responsibility and natural divisions such as by building or room.

Recommendations will include the same citations by location and applicable regulation, as was developed for the preliminary audit report.

5.13 EVALUATE SOC ACTIVITIES. This research activity involves a review of the implementation of the SOC activities developed in the safety review and analysis process (*paragraph 5.5*). It builds on and complements the review of test plans conducted during the S&H Plan implementation.

It evaluates the activities detailed in the SOP creating the SOC and its specific review activities. This SOP (ACA specific revision of CT 3900.24) will address actual or potential safety exposures for the on-site tests, not just those presented by explosives or threat articles. Where testing is done away from the Technical Center (at manufacturers facilities or customer airports, for example) additional precautions may be required. The resulting test specific S&H Plans must likewise assess any risk to the flying public from the off-site test operations.

To document omissions or discrepancies, the project report will describe the implementation of the SOC process and describe recommended corrective action(s).

5.14 IDENTIFICATION OF TRAINING STATUS. This research activity involves review of the Federal regulations and FAATC orders from *paragraph 5.4* to consolidate those requiring training or certification. It includes four related actions:

- a. Develop a list of required training activities;
- b. Review ACA records for compliance, with emphasis on Explosives Certification/Qualification and Hazard Communication Training;
- c. Review implementation of ACA's ISQAT recommendations. Where deficiencies are noted the specific training need and the applicable recipient group will be identified; and

- d. If training is conducted but, documentation is non-existent or judged to be insufficient, the missing information content of required records will be detailed in the project report. For example:
 1. Name, employee number, job title;
 2. Course title, course content outline;
 3. Presenter, presenter qualifications;
 4. Test or learning validation results; and
 5. Contact hours, date, etc.

5.15 PREPARE PROJECT REPORT. This research activity involves the preparation of the project report. It includes a description of the study objectives, methodology and a summary of the individual research activities, results, glossary and index. Information resulting from these activities will be consolidated and presented in sections similar to the following outline:

I. INTRODUCTION/BACKGROUND (Narrative Summary)

- a. ACA Safety Management Organization
- b. FAATC Safety Organization/capabilities
- c. List of Regulations/Orders or Guidelines
- d. Mandatory Training Listing
- e. MAP-Criteria for ranking corrective action

II. AUDIT/ANALYSIS RESULTS

- a. In-Progress Tests
- b. ACA wide Audits
- c. Analysis of Test Plans

III. RECOMMENDATIONS

- a. ACA wide general recommendations
- b. "Worst-First" listing by organization
- c. Creation of a Safe Operations Committee, (SOC)

IV. APPENDICES

- a. JSA Work Sheets
- b. Audit Checklists