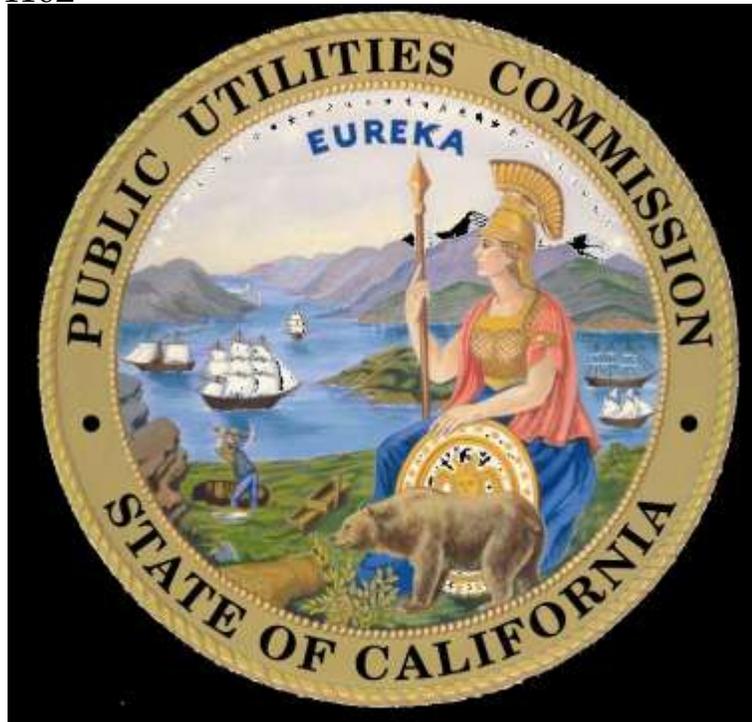

2012
TRIENNIAL ON-SITE SAFETY REVIEW OF
SACRAMENTO COUNTY AIRPORT SYSTEM
(SCAS)

RAIL TRANSIT SAFETY SECTION
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CALIFORNIA PUBLIC UTILITIES COMMISSION
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Final Report

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Safety and Enforcement Division



2012 TRIENNIAL ON-SITE SAFETY REVIEW OF SACRAMENTO COUNTY AIRPORT SYSTEM (SCAS)

ACKNOWLEDGEMENT

The California Public Utilities Commission's Rail Transit Safety Section (RTSS) staff, with the assistance of the Commission's Transit Operations and Safety Section staff, conducted this system safety program review. Staff members directly responsible for conducting safety review and inspection activities include:

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1. EXECUTIVE SUMMARY

The California Public Utilities Commission's (Commission) Safety and Enforcement Division (SED), Rail Transit Safety Section staff (Staff), with assistance from the Transit Operations and Safety Section staff (Staff), conducted an on-site system safety program review of Sacramento County Airport System (SCAS) in October 2012.

The on-site review was preceded by a pre-review conference with SCAS personnel on October 1, 2012.

Staff conducted the 2012 SCAS on-site safety review beginning on October 1, 2012. The review focused on verifying the effective implementation of the System Safety Program Plan (SSPP).

Staff held a post-review conference with SCAS personnel following the on-site safety review on November 8, 2012. Staff provided SCAS personnel with a synopsis of the preliminary review findings and preliminary recommendations for corrective actions.

The review results indicate that SCAS has a comprehensive System Safety Program Plan (SSPP). However, staff noted exceptions during the review. These exceptions are described in the Findings and Recommendations sections of each checklist. Of the 27 checklists, staff made 11 recommendations for corrective actions.

The Introduction for this report is presented in Section 2. The Background, in Section 3, contains a description of SCAS Automated People Mover (APM) system. Section 4 describes the review procedure. The review findings and recommendations are depicted in Section 5. A listing of the Abbreviations and Acronyms is in Appendix A. The 2012 SCAS Triennial Safety Review Checklist Index and the Recommendations List are included, respectively, in Appendices B and C. The Triennial Safety Review Checklists are presented in Appendix D.

2. INTRODUCTION

The Commission's General Order (GO) 164-D, *Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems*, and the Federal Transit Administration's (FTA) Rule, Title 49 Code of Federal Regulations (CFR) Part 659, *Rail Fixed Guideway Systems: State Safety Oversight*, require the designated State Safety Oversight Agencies to perform a review of each rail transit agency's system safety program at a minimum of once every three years. The purpose of the triennial review is to verify compliance and evaluate the effectiveness of each rail transit agency's System Safety Program Plan (SSPP) and to assess the level of compliance with GO 164-D as well as other Commission safety requirements. This is the first triennial on-site safety review of SCAS.

On September 1, 2012, staff mailed a letter to SCAS's Director, advising that the Commission's safety review had been scheduled October 1-5, 2012. The letter included 27 checklists that served as the basis for the review. Five of the 27 checklists outlined inspections of vital relays, electric power systems, and vehicles. The remaining 22 checklists focused on the verification of the effective implementation of the SCAS SSPP.

The 2012 SCAS triennial safety review consisted of on-site physical inspections of vital relays, vehicles, electric power systems, observations of the day to day duties performed by SCAS employees from various job classifications, records review of SSPP elements, SCAS standard operating procedures (SOPs), and other SCAS rules during October 1-5, 2012. At the conclusion of each review activity, staff provided SCAS representatives with a summary of the preliminary findings and discussed any recommendations for corrective action.

3. BACKGROUND

A. SCAS APM System Description

SCAS has embarked on a Sacramento International Airport (SMF) development process to identify and implement the vision developed in the Final SMF Master Plan to modify existing airport infrastructure and develop new facilities through the year 2020. The Master Plan was approved by the Sacramento County Board of Supervisors (BOS) in February 2004.

Completed concurrently with the Master Plan was the Terminal Modernization Program, which included preliminary facilities requirements, terminal complex alternatives, and evaluation of four terminal development concepts, two of which included an APM system. The BOS approved the selection of the preferred terminal development concept that ranked highest with respect to long term strategic, operational, environmental, feasibility / constructability, and customer service. A key decision factor was that this allowed the existing Terminal B to continue in operation while its replacement was constructed.

Through authorization from the BOS in June 2008, SCAS has contracted with Bombardier Transportation Holdings (BTH) for the design, supply, and installation and Operations and Maintenance (O&M) of an airport APM System at SMF as part of the TMP.

The APM System includes a completely automated dual lane shuttle offering passengers a connection between the Central Terminal B and Airside Concourse B. General system and operating characteristics are given in Table 1-1 and the configuration of the APM system is provided in Figure 1-1. The complete system includes power distribution, power rail and vehicle power collector assemblies and interface, communication system, the CITYFLO 650 communications-based train control system required to operate the system, automatic station platform doors, and CX-100 vehicles. The CX-100 vehicle is a fully automated, air-conditioned vehicle capable of operating in various modes twenty-four hours per day.

Major APM facilities consist of:

- An elevated dual-lane exclusive guideway with an emergency/backup walkway located between guideways
- Two passenger stations with flow-through configurations (one center platform and two side platforms) located on level three on of the Central Terminal building and level two of the Concourse building
- A maintenance facility located on level one under the Concourse B station
- A Central Control room located within the maintenance facility
- Two equipment rooms, each on level one of their respective buildings: Central Terminal and Concourse B
- A power distribution substation located on level one of the Central Terminal building

- The APM System is designed for two 2-car trains, it currently operates in a two 1-car train configuration. The System will be expanded when deemed necessary by SCAS to accommodate passenger growth

Facilities & Trains	
Stations	2
Route length	1100 feet per lane
Trains in service	2, initially 1-car, ultimately 2-car
Maintenance Facility	1
Central Control Room	1
Estimated Rider ship (passengers per hour per direction)	
Initial	2300
Ultimate	3000
Operations	
Peak period	Dual Lane Shuttle
Off-peak period	Single Lane Shuttle
Night period	On-call Single Lane Shuttle
Average Round Trip Time	Approx 3.0 minutes
Cruise Speed	Approx 20 mph
Operating Hours	24 / 7 / 365

Table 1-1 SMF APM System Characteristics

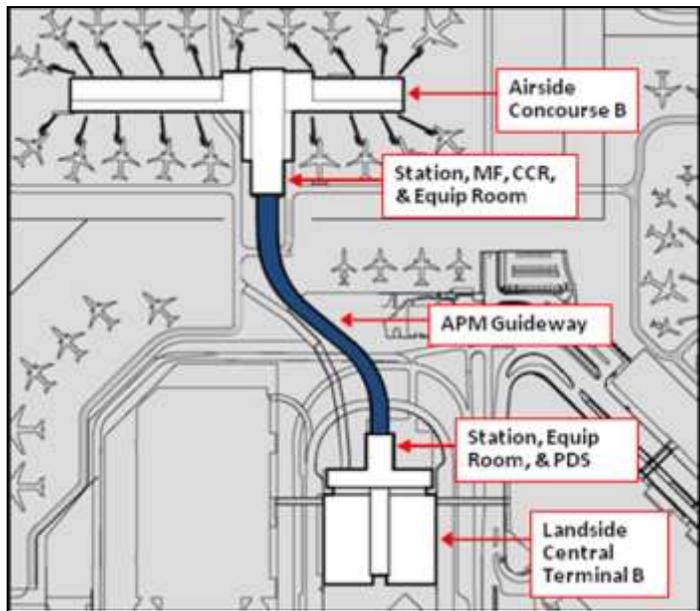


Figure 1-1 SMF APM System and Facility Configuration

The APM operates wholly on the SMF property and is intended for airline and airport employees/contractors and ticketed passengers only. Arriving passengers traveling from Concourse B to Central Terminal B will be originating from the secure side of the Airport, having cleared security at their airport of origin.

Scheduled maintenance for the System occurs during the night period to minimize interference with passenger service. Any unscheduled maintenance takes place as needed, taking into consideration the need for safe and reliable service for airport patrons and employees.

The Commission approved the SSPP and the SSP of the SCAS APM system on December 16, 2010. The SCAS APM system became operational on October 1, 2011.

APM Ridership numbers for paying passengers who have departed and arrived at the airport via airplane and utilized the APM system in the one year period from November 2011 to November 2012 reached 7,100,851 passengers.

4. SAFETY REVIEW PROCEDURE

Staff conducted the 2012 safety review in accordance with Rail Transit Safety Section Procedure RTSS-4, *Procedure for Performing Triennial Safety and Security Reviews of Rail Transit Systems*. Staff developed 27 checklists to evaluate the adequacy of SCAS's system safety program and the efficacy of its implementation. The safety evaluation included the system's various departments, programs and processes which have system safety functions and responsibilities. It is based on Commission and FTA requirements, SCAS's System Safety Program Plan, safety related SCAS documents, and the staff's knowledge of the APM system. A list of the 27 checklists is contained in Appendix B.

Each checklist identifies safety related elements and characteristics inspected and/or reviewed by staff. Substantiating Commission rules and regulations and SCAS reference documents, relevant rules and policies establish the safety program requirements. The completed checklists include staff's findings and recommendations for any findings indicating non-compliance. In addition to recommendations based on specific findings of non-compliance, the completed checklists may include staff comments designed to improve SCAS's system safety program. Finally, the completed checklists may include references to the methods used by staff to evaluate compliance with SCAS's System Safety Program Plan. The methods used to perform the review include:

- Discussions and interviews with SCAS management
- Review of rules, procedures, policies, and records
- Observations of operations and maintenance activities
- Interviews with operations and maintenance employees
- Inspections and measurements of equipment and infrastructure

Upon completion of the safety review and inspection activities associated with each checklist, staff reviewed findings and, if appropriate, preliminary recommendations for corrective actions with the respective SCAS personnel were verbally provided. This practice not only provides a chance to clear up any misunderstandings about the findings and recommendations, it also provides the SCAS representative an opportunity to promptly address any necessary safety improvements.

The review checklists concentrated on system safety program requirements that affect the safety of the operations, public, employees, and property that are important to reducing safety hazards, preventing accidents, and improving safety.

5. FINDINGS AND RECOMMENDATIONS

The SCAS 2012 Triennial Safety Review was a comprehensive review of SCAS's system safety program elements and their implementation. To achieve that end, staff interviewed management and operations & maintenance employees, reviewed system safety program elements, examined and evaluated selected program records, inspected selected facilities and equipment, and observed various operations and maintenance activities.

The reviewers and inspectors concluded that the SCAS rail system has a comprehensive SSPP and is effectively implementing the plan. The reviewers and inspectors, however, did make recommendations to improve the system safety program.

Overall, the review confirms that SCAS is mostly in compliance with its SSPP. Staff's findings identify areas where changes should be made to further improve SCAS's APM system safety to bringing SCAS into full compliance with its SSPP. The review identified 11 recommendations from the 27 checklists.

Listed below, in outline form and in the same order as the checklists, are the SCAS system safety program elements which staff reviewed or inspected. Each entry also includes, when appropriate, a brief summary of staff's findings of non-compliant conditions and recommendations to SCAS for corrective action.

1. Policy Statement & Authority for SSPP (SCAS Leadership Involvement and Commitment to Safety)

No findings of non-compliance; no recommendations.

2. SSPP Goals & Objectives

No findings of non-compliance; no recommendations.

3. Overview of Management Structure

No findings of non-compliance; no recommendations.

4. SSPP Control & Update Procedure

No findings of non-compliance; no recommendations.

5. SSPP Implementation Activities & Responsibilities

No findings of non-compliance; no recommendations.

6. Hazard Management Process

Findings of Non-Compliance:

- SCAS has not yet defined minimum thresholds for the notification and reporting of hazard(s) to the CPUC and has no specific process for reporting of hazard resolution activities to the CPUC (as required by items (e) and (f) in Section 6 of GO 164-D).

Recommendations:

SCAS should revise its SSPP and define minimum thresholds for the notification and reporting of hazard(s) and hazard resolution activities to the CPUC.

7. System Modification

Findings of Non-Compliance:

No findings of non-compliance; no recommendations

8. Safety and Security Certification

No findings of non-compliance; no recommendations.

9. Safety Data Collection and Analysis

No findings of non-compliance; no recommendations.

10. Accident/Incident Investigations

No findings of non-compliance; no recommendations.

11. Emergency Management Program

No findings of non-compliance; no recommendations.

12. Internal Safety Audits

No findings of non-compliance; no recommendations.

13-A. Rules Compliance

Findings of Non-Compliance:

- Staff noted that there were no formal records of operational evaluations documented for any of the employees at SCAS APM as required in the SSPP, Section 13.
- Staff noted that there was no evidence of a formal checklist used to document compliance checks as required in the SSPP, Section 13.
- Staff was not given, nor did SCAS have knowledge of any Operations Compliance Program as required in the SSPP, Section 13.
- Staff noted that these evaluations were not being conducted monthly, quarterly, and yearly as required in the SCAS SSPP, Section 13.

Recommendations:

1. SCAS should clearly outline the operational evaluation procedures for all employees.
2. SCAS should verify through internal auditing procedures that all SSPP requirements are being met.

13-B. Rules Compliance: Operation Safety Compliance Program Review

Findings of Non-Compliance:

SSPP, Section 1.4 references an incorrect Rule Book.

Recommendations:

SCAS should correct the SSPP to reflect the proper Rule Book.

14. Facilities Equipment Inspections and Maintenance

No findings of non-compliance; no recommendations.

15-A. Maintenance Audits and Inspections – CPUC Signal Inspector

Findings of Non-Compliance:

- Monthly Test for April 2012 was not performed.

- MIMS maintenance record keeping program is duplicating reports that gives the impression maintenance testing is delinquent.
- Central Control Two week testing is being performed weekly.
- RATC Cabinet Airside, PN 150B 400 ohms Vital Relays A7-URP-K12 test date shows tested 7/18/08, A7-URP-K13 test date shows 7/22/08, A7-URP-K8 test date 7/21/08 and A7-URP-K9 test date 7/16/08, Staff will review relay test records (CL #15-C).
- ORS cabinet wego buss termination TB1 – 35 & 38 T wires not tagged.

BTH corrected the above findings a few days following the inspection and therefore no recommendations were issued.

Recommendations:

None

15-B. Maintenance Audits and Inspections – Train Inspections – CPUC Equipment Inspector

No findings of non-compliance; no recommendations.

15-C. Equipment Maintenance Program, Signal System & Vital Relays Maintenance – Records Review

Findings of Non-Compliance:

- No Test records were provided, noncompliance to General Order 164-D.
- No records of vital relays in field, location, serial number for tracking purposes.
- No Vital Relay Testing performed prior to start-up to provide the starting point for all future checks as required in Sacramento International Airport Terminal Modernization Program APM Wayside ATC System Manual 4.3.5.

Recommendations:

1. SACS should develop a data sheet to identify where each vital relay is located with serial numbers and date of required test last performed.
2. SCAS should follow developed SOP outlined in Sacramento International Airport Terminal Modernization Program APM Wayside ATC System Manual 4.3.5 and perform the vital relay test on all vital relays, which are now considered pass due.

15-D. Data Transmission System Maintenance – CPUC Inspector

Findings of Non-Compliance:

- DTS Preventive Maintenance 4.2.1 Cleaning and inspecting Data Transmission System Cabinet Equipment, A to H to be performed every three months. Currently these tests are being recorded and performed semiannual. This adjustment was due to the sensitive equipment and wiring in these cabinets, minimizes disruption to equipment. Staff visual inspection saw just a little bit of debris in Airside DTS cabinet floor.
- DTS Preventive Maintenance 4.2.2 Diagnostic Computer Air Flow Check. Once a month check was not performed April of 2012, Staff visual inspection of Diagnostic Computer Air Flow Check and no discrepancy noted.

Recommendation:

SACS should have Bombardier review and/or revise the Sacramento International Airport Terminal Modernization Program APM Data Transmission System Manual to determine whether or not the scheduled maintenance adjustment is acceptable.

16. Training and Certification Programs for Employees and Contractors

Findings of Non-Compliance:

- Employee # 200002 was not given rules training as outlined in the training procedures.
- There is not an outlined procedure for training new employees. There is not a distinction between refresher training given to existing employees and complete training given to new employees. CDRL # 74, Section 10 briefly discusses new employees and then notes the refresher training for employees. This manual should describe all forms of training and how that training will be executed, in detail.
- The training schedule in the training manual is outdated. (CDRL # 74, Section 6)
- The Training Manual referenced in the SCAS SSPP, Section 1.4 is not the manual currently being used. The SDC Training Manual (002550) is not mentioned in the SSPP. What Training document is in effect?

Recommendations:

1. SCAS should ensure that all employees are trained according to their current procedures.
2. SCAS should develop a training program that defines a program specifically for new employees.
3. SCAS should have the most current training schedule referenced. The schedule should display the applicable training dates or use general terms applicable to all

years. (CDRL # 74, Section 6).

4. SCAS should update the current SSPP to reflect the correct Training Manual.

17. Configuration Management

No findings of non-compliance; no recommendations.

18. Local, State, and Federal Requirements and Employee Safety Program

No findings of non-compliance; no recommendations.

19. Hazardous Materials Programs

No findings of non-compliance; no recommendations.

20. Drug and Alcohol Program

No findings of non-compliance; no recommendations.

21. Procurement Process

No findings of non-compliance; no recommendations.

22. Hours of Service of Train Operators, Train Controllers, Supervisors, and Signal Maintenance Technicians

No findings of non-compliance; no recommendations.

23. Contractor Safety Program

No findings of non-compliance; no recommendations.

APPENDICES

- A. Abbreviations and Acronyms List
- B. SCAS 2012 Triennial Safety Review Checklist Index
- C. SCAS 2012 Triennial Safety Review Recommendations List
- D. SCAS 2012 Triennial Safety Review Checklists

APPENDIX A
ABBREVIATIONS and ACRONYMS LIST

Abbreviation / Acronym	Description
APM	Automated People Mover
ATCS	Automatic Train Control System
BOS	Board of Supervisors
BTH	Bombardier Transportation Holding
CFR	Code of Federal Regulations
Commission	California Public Utilities Commission
CPUC	California Public Utilities Commission
DTS	Data Transmission System
FAA	Federal Aviation Administration
FMI	Field Modification Instruction
FTA	Federal Transit Administration
GO	General Order
HSE	Health Safety & Environment
MMIS	Maintenance Management Information System
MSDS	Material Safety Data Sheet
O&M	Operations and Maintenance
RTCB	Rail Transit and Crossing Branch
RTSS	Rail Transit Safety Section
SED	Safety and Enforcement Division
SCAS	Sacramento County Airport System
SMF	Sacramento International Airport
SOP	Standard Operating Procedure
SSC	Safety & Security Committee
SSCP	Safety and Security Certification Plan
SSP	System Security Plan
SSPP	System Safety Program Plan
Staff	Safety and Enforcement Division personnel
TCA	Temporary Change Authorization
TMP	Terminal Modernization Program
TSA	Transportation Security Administration

APPENDIX B

2012 SCAS TRIENNIAL SAFETY REVIEW CHECKLIST INDEX

Checklist No.	Element / Characteristic	Checklist No.	Element / Characteristic
1	Policy Statement & Authority for SSPP (SCAS Leadership Involvement and Commitment to Safety)	14	Facilities and Equipment Inspections
2	SSPP Goals & Objectives	15-A	Maintenance Audits and Inspections – CPUC Signal Inspector
3	Overview of Leadership Structure	15-B	Maintenance Audits and Inspections – Train Inspections – CPUC Equipment Inspector
4	SSPP Control & Update Procedure	15-C	Equipment Maintenance Program, Vital Relay Maintenance – Records Review
5	SSPP Implementation Activities & Responsibilities	15-D	Data Transmission System Maintenance – CPUC Inspector
6	Hazard Management Process	16	Training and Certification Programs for Employees and Contractors
7	System Modification	17	Configuration Management and Control
8	Safety and Security Certification	18	Local, State, and Federal Requirements and Employee Safety Program
9	Safety Data Collection and Analysis	19	Hazardous Materials Programs
10	Accident/Incident Investigations	20	Drug and Alcohol Program
11	Emergency Management Program	21	Procurement Process
12	Internal Safety Audits	22	Hours of Service – Controllers, Train Operators & Maintainers
13-A	Rules Compliance	23	Contractor Safety Program
13-B	Rules Compliance – Operational Safety		

APPENDIX C

2012 SCAS TRIENNIAL SAFETY REVIEW RECOMMENDATIONS LIST

No.	Recommendation	Checklist No.
1	SCAS should revise its SSPP and define minimum thresholds for the notification and reporting of hazard(s) and hazard resolution activities to the CPUC.	6
2	SCAS should clearly outline the operational evaluation procedures for all employees.	13-A
3	SCAS should verify through internal auditing procedures that all SSPP requirements are being met.	13-A
4	SCAS should correct the SSPP to reflect the proper Rule Book.	13-B
5	SACS should develop a data sheet to identify where each vital relay is located with serial numbers and date of required test last performed.	15-C
6	SCAS should follow developed SOP outlined in Sacramento International Airport Terminal Modernization Program APM Wayside ATC System Manual 4.3.5 and perform the vital relay test on all vital relays, which are now considered pass due.	15-C
7	SACS should have Bombardier review and/or revise the Sacramento International Airport Terminal Modernization Program APM Data Transmission System Manual, to determine whether or not the scheduled maintenance adjustment is acceptable.	15-D
8	SCAS should ensure that all employees are trained according to their current procedures.	16
9	SCAS should develop a training program that defines a program specifically for new employees.	16
10	SCAS should have the most current training schedule referenced. The schedule should display the applicable training dates or use general terms applicable to all years. (CDRL # 74, Section 6).	16
11	SCAS should update the current SSPP to reflect the correct Training Manual.	16

APPENDIX D

2012 SCAS TRIENNIAL SAFETY REVIEW CHECKLISTS

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	1	Subject	Policy Statement and Authority for System Safety Program Plan (Leadership Involvement and Commitment to Safety)
Date of Review	October 01, 2012 @11a Conf. Rm: #1 T-B	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC)
CPUC Reviewers/ Inspectors	Steve Artus Steve Espinal Raed Dwairi	SCAS Person(s) Contacted	Lisa Stanton Lance McCasland David Delemos

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Policy Statement and Authority for SSPP (SCAS Leadership Involvement and Commitment to Safety)

Interview SCAS Chief Operating Officer and Deputy Director of Operations & Maintenance to determine and discuss:

1. Source, frequency, and depth of safety information provided to the Chief Operating Officer, whether safety is included as a regular topic at SCAS SSC meetings, and whether SCAS Safety gives reports at SSC Meetings.
2. Methods and incentives included in the management performance system to facilitate a system safety culture within the organization.
3. Formal meetings held and attended by SCAS Leadership to discuss safety performance (such as ongoing evaluation of goals and targets).
4. SCAS Chief Operating Officer and Deputy Director of Operations & Maintenance of high priority safety issues related to operations and capital projects.
5. SCAS COO awareness of the status of all corrective actions including those initiated by accidents, hazardous conditions, internal safety & security audits, CPUC triennial reviews, and CPUC inspections.
6. Safety issues regarding interagency coordination among various contractors.

RESULTS/COMMENTS

Activities:

Staff interviewed the COO and the Deputy Director of O&M and determined that they well informed of APM safety through either attendance of the SSC meetings or review of the safety reports and SSC meeting minutes. The safety management and oversight responsibilities of the COO and the Deputy Director of O&M described in the SSPP ensure the high priority on safety issues and their awareness of the status of all corrective actions and CPUC inspections.

Findings:

No exceptions were noted.

Recommendations:

None.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	2	Subject	System Safety Program Plan Goals & Objectives
Date of Review	October 01, 2012 @11:30a Conf. Rm: #1 T-B	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC)
CPUC Reviewers/ Inspectors	Steve Artus Steve Espinal Raed Dwairi	SCAS Person(s) Contacted	Lance McCasland David Delemos

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. Door Breaches Metrics

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

SSPP Goals and Objectives

Conduct an interview with SCAS and review appropriate records to:

1. Determine if the SSPP goals and objectives have been achieved.
2. Obtain examples of how goals are evaluated (metrics/measures) and review documentation used to measure and track SCAS activity to meet the goals and objectives (for example, if SCAS set a goal of reducing incidents by 10%, has this been achieved? Where is it tracked and reported?).
3. Determine how safety performance is reported to the Chief Operating Officer or Leadership.
4. Make a determination regarding the adequacy of the safety information provided to the SCAS Chief Operating Officer (is COO receiving sufficient information to ensure SCAS is meeting its safety goals and objectives? Are rule(s) violations and other key safety measurements being tracked and reported to the COO?).
5. Determine whether the stated goals and objectives should be revised.
6. Determine whether management responsibilities are adequately identified for the goals and objectives.

RESULTS/COMMENTS

Activities:

Staff determined that the SSPP goals and objectives have been achieved as described in Section 2.2 of the SSPP. Safety performance is reported to the COO through the SSC monthly meetings. The COO co-chairs the APM system SSC and the Deputy Director of O&M is responsible for overseeing and enforcing the SSPP and safety program. The SSPP requires that supervisors and managers enforce safety standards applicable to their departments to ensure that the goals, objectives, and contractual performance requirements are achieved. Stated goals and objectives are adequate and management responsibilities are adequately identified for the goals and objectives in Section 3 of the SSPP.

Findings:

No exceptions were noted.

Recommendations:

None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	3	Subject	Overview of Leadership Structure
Date of Review	October 01, 2012 @2p; Conf. Rm: #4 T-A Landside	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC)
CPUC Reviewers/ Inspectors	Steve Artus Steve Espinal Raed Dwairi	SCAS Person(s) Contacted	David Delemos

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. Modification and Change Form
4. SSC Meeting Minutes

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Overview of Management Structure

Conduct an interview with SCAS SSC and review appropriate records to:

1. Discuss SCAS process to integrate safety into SCAS operations and maintenance activities.
2. Solicit opinions regarding the effectiveness of the organization and request a few examples of how this organization has worked to resolve identified safety issues.
3. Determine if there are specific needs such as the ability to maintain schedules for SSPP updates and key activities, such as internal safety & security audits and accident investigations SCAS SSC cannot meet due to limitations in personnel or resources.
4. Review SSC meeting minutes from the past year to verify that the meetings followed the SSPP requirements.

RESULTS/COMMENTS

Activities:

Staff determined that SCAS SSC has a process to integrate safety into operations and maintenance activities. Identified safety issues are discussed at the monthly safety and security committee meeting and resolved. There are no limitations in personnel or resources that would limit the SSC from meeting the requirements of the safety program as reflected in the meeting minutes of the SSC.

Findings:

No exceptions were noted.

Recommendations:

None.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	4	Subject	SSPP Control & Update Procedure
Date of Review	October 01, 2012 @3p; Conf. Rm: #4 T-A Landside	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC)
CPUC Reviewers/ Inspectors	Steve Artus Steve Espinal Raed Dwairi	SCAS Person(s) Contacted	David Delemos Kathy Sutton

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. Annual Review letter to CPUC

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

SSPP Control & Update Procedure

Conduct an interview with SCAS SSC and review appropriate records to:

1. Ensure the SSC understands the requirements and is implementing them.
2. Verify the required annual SSPP review process is being implemented according to the approved process specified in the SSPP (review responsibility, internal timeframes, comprehensiveness, and sign-offs).

RESULTS/COMMENTS

Activities:

Staff determined that the SSC understands the SSPP control and update procedure requirements and is implementing them. The required annual SSPP review process will be implemented according to the approved process identified in the SSPP following the completion of the internal safety audit which started in the week of September 17, 2012 and the CPUC triennial review.

Findings:

No exceptions were noted.

Recommendations:

None.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	5	Subject	SSPP Implementation Activities & Responsibilities
Date of Review	October 02, 2012 @ 11a; Conf. Rm: #4 T-A Landside	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC)
CPUC Reviewers/ Inspectors	Steve Artus Steve Espinal Raed Dwairi	SCAS Person(s) Contacted	David Delemos Kathy Sutton

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SSC Tracker

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

SSPP Implementation Activities and Responsibilities

Conduct an interview with SCAS SSC and review appropriate records to:

1. Verify each manager, department and contractor charged with responsibility and accountability for the SSPP implementation, enforcement, and effectiveness.
2. Identify any challenges each manager, department and contractor has in performing the SSPP safety-related tasks.
3. Verify leadership accountability for the performance of the safety-related activities, and if serious or potentially serious deficiencies are found, expand the review to include additional and/or related activities.

RESULTS/COMMENTS

Activities:

Staff determined that SSPP implementation activities and responsibilities are being met by SCAS and its contractor and no challenges have been identified in performing the SSPP safety-related activities.

Findings:

No exceptions were noted.

Recommendations:

None.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	6	Subject	Hazard Management Process
Date of Review	October 03, 2012 @9a; Conf. Rm: #4 T-A Landside	Department(s)	Safety
CPUC Reviewers/ Inspectors	Raed Dwairi	SCAS Person(s) Contacted	David Delemos

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS Accident Investigation Procedure
4. Bombardier Corporate Policy/Local HSE Policy
5. CDRL #18
6. Tool Box meeting
7. PPE Initial Issue
8. Access Control Plan
9. Central Control Logs for Occurrences
10. BTH Shift Pass down
11. OSHA 300A
12. Past Annual Internal Audits and Triennial Reviews
13. Weekly and Monthly facility inspections
14. Rule Book System Operations vA
15. SSC Tracker

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Hazard Management Process

Interview SCAS representative(s) / APM System Contractor and review appropriate records to determine whether or not:

1. SCAS is identifying hazards through the sources described in the SSPP. Sources may include, but are not limited to:
 - Reports and complaints from passengers, field or management personnel;
 - APM system contractor's Central Control logs and maintenance systems;
 - Reports from APM system contractor's shift pass down;
 - Review of APM system contractor's Central Control logs for unusual occurrences;
 - SCAS / APM system contractor's OSHA 300A;
 - Annual internal audits;
 - APM system contractor's weekly and monthly facility inspections;
 - APM system contractor's Rule book compliance;
 - Results from CPUC Triennial Reviews;
 - Results from accident investigations and trend analysis.
2. SSC maintains a mechanism to capture and track identified hazards through analysis and resolution.
3. SCAS has defined minimum thresholds for the notification and reporting of hazard(s) to the CPUC and has a specified process for reporting of hazard resolution activities to the CPUC (as required by

items (e) and (f) in Section 6 of GO 164-D).

4. Identified hazards are being evaluated according to the methods established in the SSPP.
5. Corrective Action Plans (CAPs) are developed to address identified hazards and the CAPs identify the individual or department responsible for implementation and a schedule for completion.
6. SCAS SSC follows up on outstanding CAPs developed to mitigate or resolve hazards.
7. Request examples of how the SSC followed the process, monitored other departments, and ensured identified hazards were reported to the SSC.

RESULTS/COMMENTS

Activities:

Staff interviewed SCAS representative in charge of the hazard management process and reviewed relevant program documentation and determined that the program complies with the requirements of Section 6 of the SSPP and General Order (GO) 164-D rules with the exception of items (e) and (f) in Section 6 of the GO. SCAS has not reported any hazards to the CPUC since the APM became operational in October, 2011.

Findings:

SCAS has not yet defined minimum thresholds for the notification and reporting of hazard(s) to the CPUC and has no specific process for reporting of hazard resolution activities to the CPUC (as required by items (e) and (f) in Section 6 of GO 164-D).

Recommendations:

SCAS should revise its SSPP and define minimum thresholds for the notification and reporting of hazard(s) and hazard resolution activities to the CPUC.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	7	Subject	System Modification
Date of Review	October 02, 2012 @2pm; Kathy Sutton's Office (Terminal A)	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC)
CPUC Reviewers/ Inspectors	Rupa Shitole	SCAS Person(s) Contacted	SCAS - Kathy Sutton – SSC Committee Coordinator SCAS - David Delemos (Facilities Coordinator)

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. BTHAPM System Contractors Access Control Plan
4. SMF APM Modification / Change Request Form
5. Sample to modification projects – Flags/Fire Alarm

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

System Modification

Conduct interviews and review appropriate records to:

1. Determine the SSPP and referenced or supporting procedures ensure a process exists for addressing safety issues and concerns in system modifications.
2. Verify the SSC was involved in assessing at least two system modifications over the last three years prior to their placement in revenue service; verify that the process followed was consistent with SSPP requirements and included an evaluation of the modifications' potential hazards to the system.
3. Determine the SSC role in ensuring that safety concerns are addressed in system modifications by identifying their specific activities in the process such as documented participation in testing and inspections and observations performed at work sites.
4. Determine through a sample of system modification projects (e.g. fire protection system changes, etc.) if the modification meets the specifications or project requirements, and if any unauthorized modifications were performed.

RESULTS/COMMENTS

Activities:

Staff interviewed SCAS representatives who are in charge of the System Modification process and noted the following:

1. SSPP Section 8 describes the System Modification process. Safety design reviews are an integral part of the modification process and are referenced in this section of the SSPP dated July 2010 Final Revision 6.
2. Staff reviewed the SMF APM Modification/Addition Request Forms Log document provided. There were five logs noted dealing with Art Work Upgrade; APM Response to Fire Alarm Activation Reconfiguration; APM Announcement and Signage Changes; Wheelchair Procedure for APM; and APM Emergency Walkway. Each log was associated with an internal SSC Tracker number. Further, June 2012 and July 2012 SSC meeting minutes were reviewed and verified that the process was being followed as required.
3. Yes, SSC role ensured that safety concerns are addressed in the system modification. June 2012 and July 2012 SSC meeting minutes were reviewed to determine SSC participation.
4. Staff reviewed the projects related to Fire Alarm Activation Reconfiguration and APM Signage Changes.

These were project upgrade requirements and no unauthorized modifications were performed. The proper channel for approval was followed.

Findings:

None

Recommendations:

None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	8	Subject	Safety and Security Certification
Date of Review	October 01, 2012 @1p; #5 T-A Kathy Sutton's Office	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC)
CPUC Reviewers/ Inspectors	Steve Espinal	SCAS Person(s) Contacted	Kathy Sutton Brad Bonn

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS Safety & Security Certification Plan for the Automated People Mover System
4. Pre-Operation (DSI CPUC meeting) and SSC Meeting Minutes
5. Safety Verification Report (Submitted September 2011)

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Safety and Security Certification

Interview the SCAS representative(s) in charge of the Safety Certification Program and review the records of any major projects to:

1. Determine if a formal safety and security certification plan (SC Plan) has been submitted by SCAS and approved by the Commission.
2. Verify that each Safety Certification Plan was consistent with GO 164-D, SCAS SSPP, and SCAS reference documents.
3. Determine whether or not there are effective communications and liaison with CPUC staff throughout the life of the current and planned projects including Preliminary Engineering Design Phase
4. Determine whether or not all design and construction changes were properly coordinated and addressed in the safety certification process
5. Determine whether or not all identified hazards have been eliminated or controlled as required under the Safety Certification Plans
6. Determine whether or not the Safety Certification Verification Report was submitted to the CPUC in a timely manner according to GO 164-D

RESULTS/COMMENTS

Activities:

SCAS has generated one Safety Certification Plan and Safety Certification Verification Report associated with the SCAS construction project which is now complete. Both reports have been completed with the associated approval culminating with the approval of CPUC resolution. Reviewed the SCAS safety certification plans and plans associated with the Sacramento Airport Automated People Mover. Also reviewed SCAS System Safety Program Plan (SSPP) and found it to be in compliance with General Order 164-D. SCAS has worked closely with emergency services and CPUC when designing and constructing the SCAS People Mover. Also the SCAS Safety Certification Verification Report was submitted to the CPUC over 21 calendar days prior to Operation.

SCAS has no plans for new construction in the near term. The next expansion project is doubling the number from two to four. However this work is planned for possibly 2016. No new projects are planned in the near term.

Findings:

None

Recommendations:

None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	9	Subject	Safety Data Collection and Analysis
Date of Review	October 02, 2012 @3.30pm; Conf. Rm #8 T-B Sierra	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC)
CPUC Reviewers/ Inspectors	Rupa Shitole	SCAS Person(s) Contacted	David Delemos (Facilities Coordinator) Alex Williams (Airport Safety Specialist)

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. Accident/Incident Investigation Procedures (AIIP)
4. SMF SDC APMs Monthly O&M Report
5. Site Computer–Management System to collect and track Preventive Maintenance

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Safety Data Collection and Analysis

Interview the SCAS representative(s) responsible for safety data acquisition and analysis and review the safety data acquisition and analysis program requirements to determine if:

1. The data collected includes, at minimum, information concerning SCAS accidents and incidents, employee performance failures, equipment failures, and procedural deficiencies.
2. The safety data is supplied by and collected from all departments including Operations, Claims Management, and Maintenance as appropriate.
3. The safety data collected is then analyzed and, if necessary, incorporated into SCAS's Hazard Identification and Resolution Process.
4. The safety data collected and the resulting analyses are made available to SCAS departments for use in planning their safety-related activities.
5. Periodic reporting regarding the results of the safety data analysis is provided to the SCAS Executive Management as appropriate.
6. Verify that the safety data sources identified in the SSPP are being used and data analysis and distribution are implemented.

RESULTS/COMMENTS

Activities:

Staff interviewed SCAS representatives who are in charge of the Safety Data Collection and Analysis process and noted the following:

1. There was no data available for accidents and incidents, employee performance failures, and procedural deficiencies since no incidents were reported on the system. The only data available was for equipment failures such as doors, maintenance events, and others security breaches.
2. Yes, data is collected from all departments including Operations, Claims Management, and Maintenance as appropriate. SCAS has a Site Computer that logs all data electronically into SAP.
3. Yes, safety data collected is then analyzed and, if necessary, incorporated into SCAS's Hazard Identification and Resolution Process as stated in SSPP Sections 6 and 9. SSC meets on a monthly basis to discuss the data.

4. Yes, the safety data collected and the resulting analyses are made available to SCAS departments for use in planning their safety-related activities. Staff reviewed the SMF SDC APMS Monthly O & M Reports dated January 2012, June 2012, and August 2012.
5. The SSC meets on a monthly basis and this meeting is one of the main meetings where SCAS Executive Management is present. The results of the safety data analysis is provided to the SCAS Executive Management as appropriate.
6. Yes, the safety data sources identified in the SSPP are being used and data analysis and distribution are implemented accordingly. Additionally, employees, patrons/passengers, and others can report via online reporting system or using a telephone.

Findings:

None

Recommendations:

None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	10	Subject	Accident/Incident Investigations
Date of Review	October 03, 2012 @ 11a; Conf. Rm #4 T-A Landside	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC)
CPUC Reviewers/ Inspectors	Steve Espinal	SCAS Person(s) Contacted	David Delemos Kathy Sutton

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS Accident Investigation Procedures
 - a. Reports if any
 - b. Corrective Action Plans

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Accident/Incident Investigations

Interview SCAS's responsible representatives and randomly select at least four accidents involving an injury or fatality reportable to the CPUC during the past 24 months and determine if:

1. Each accident was reported to the CPUC as required and that the final report was submitted as required.
2. SCAS reported the accidents to the CPUC within two hours as required by GO 164-D, Sections 7.1 & 7.2.
3. The immediately reportable incident notifications to CPUC staff contained all of the information required by GO 164-D, Section 7.3.
4. The accident was investigated in compliance with the requirements of GO 164-D, Section 8, and CPUC-approved accident investigation procedures.
5. Ensure that the final report identified:
 - o Each item covered in the investigation.
 - o The investigation findings of the most probable cause.
 - o Underlying contributing causes.
 - o A CAP to address the identified causes and that it minimized the incident from recurring.
 - o A schedule for implementing the CAP, which has been completed or is being monitored on an on-going basis.

RESULTS/COMMENTS

Activities:

SCAS has incurred no accidents since starting service in late 2011. SCAS, SSPP does abide by General Order 164-D. Since there have been no accidents there have been no findings of non-compliance regarding SCAS SSPP or General Order 164-D.

Findings:

None

Recommendations: None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	11	Subject	Emergency Management Program
Date of Review	October 01, 2012 @3p; #6 T-A Sheri Thompson-Duarte's Office	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC)
CPUC Reviewers/Inspectors	Howard Huie	SCAS Person(s) Contacted	Sheri Thompson-Duarte, David Delemos, Katherine Sutton

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS System Security Plan (SSP)
4. Trial and Simulation Drills prior to opening
5. SMF – APM Joint Exercise

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Emergency Management Program

Conduct the necessary interviews regarding SCAS's emergency planning, training, and drill/exercise program and review appropriate records prepared during the last year to:

1. Solicit an overview of the process for SCAS's emergency planning, training, and drill/exercise program and specific examples of coordination with emergency response agencies on emergency planning and drill/exercises
2. Verify a drill/exercise schedule has been created and followed and verify emergency responders and other outside agencies participation in SCAS's emergency planning.
3. Determine when was the last drill/exercise performed and if post-drill action report developed? Was the post-drill action report used to make revisions to SCAS's Emergency Familiarization Response Plan and/or procedures? If so, have these corrective actions been implemented with SCAS staff and emergency responders?
4. Determine if SCAS conducts periodic Fire Life Safety meetings with sheriff and fire departments in SCAS jurisdictions, emergency response agency familiarization activities have occurred as scheduled and corrective actions have been implemented.

RESULTS/COMMENTS

Activities:

1. The Sacramento County Airport is required by the Federal Aviation Administration (FAA) to have an annual "Table Top Emergency Drill" and a "Full Scale Triennial Emergency Drill" in order to keep their operating certificate. SCAS invited the FAA to the Annual and Triennial Emergency Drills to observe. Per SCAS SSPP, Section 11.3, SCAS will hold two Emergency Drills per year, which the APM Safety and Security Committee (SSC) shall monitor for completion of all corrective actions. Emergency drills include but are not limited to the following agencies and airport departments:
 - Bombardier Transportation Holding, Inc.
 - Aircraft Rescue and Fire Fighting
 - Airport Communications Center
 - Airport Security

- Maintenance and Facilities
- Sacramento Sheriff's Airport Division
- Sacramento County Fire Department

2. SCAS Facilities and Maintenance department organizes the APM Emergency Exercises/Drills. The Exercises/Drills notices are sent via an email Outlook Calendar Appointment, which is entered into the respective invitees' calendars. SCAS presented Staff with a sample typical Outlook Calendar invite for the past July 2011 drill. The next Full Scale Drill for SCAS is scheduled for May 4, 2014, however, smaller APM drills are scheduled to take place in the interim.
3. SCAS and Bombardier Transportation Holdings, Inc. held a Table Top Emergency Exercise/Drill on July 15, 2011 and a Full Scale Emergency Exercise/Drill for APM was executed on July 19, 2011, a few weeks before the APM was put into service. An After Action Report dated July 19, 2011, approved on July 20, 2011 by the Deputy Director of Maintenance and Facilities, Deputy Director of Operations, and Bombardier Project Engineer Manager. The After Actions Report includes comments and critiques from the participants and an Improvement Matrix. Items in the After Action Report are tracked in the SSC Tracker spreadsheet and addressed at every SSC meeting until the items are completed.
4. SCAS SSC is required to have monthly Safety and Security meetings during the first year of APM operations. After the first year, the SSC will meet at a minimum every quarter per SCAS SSP, Section 4.4. SCAS randomly presented meeting minutes from Safety Security meetings dated December 31, 2011, January 31, March 5, April 19, May 21, June 21, July 13, 2012. Examples of typical format and topics of discussion are:

- Open Meeting/Introductions
- Old Business
 - Sign Installation
 - Claim Report Back
 - RAM APM Operations
 - Guideway Artwork
- New Business
 - Mechanical Issues
 - APM Storage Issues
 - Safety and Security Issues
 - Public Feedback
 - Status of Claims
 - Miscellaneous
- Roundtable

SSC meeting participants include but are not limited to: Airport Operations, Airport Facilities and Maintenance, Airport Fire Captain, Communications Center, Airport Security Manager, Airport Special Projects, Airport Safety Specialist, Bombardier Representative(s), Sacramento Sheriff's Captain, CPUC.

Findings:

None

Recommendations:

None.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	12	Subject	Internal Safety Audits
Date of Review	October 02, 2012 @2.45pm; Conf. Rm: #5 T-A Kathy Sutton's Office	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC), SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Rupa Shitole	SCAS Person(s) Contacted	Kathy Sutton (SSC Committee Coordinator)

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS Audit Schedule 2012 - 2014
4. SCAS Internal Audit Team files
5. SCAS's APM System Contractors Monthly / Weekly Facility Inspections

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Internal Safety Audits

Conduct the necessary interviews and review appropriate records prepared during the last year to:

1. Determine if a three-year internal audit schedule was developed and submitted to the CPUC.
2. All of the required system safety program elements were evaluated within the past three years.
3. The audit included the use of field verification methods to verify the condition of infrastructure and rules compliance activities.
4. The audit adequately addresses interdepartmental and interagency communication issues and whether or not SCAS has a process in place for addressing and overcoming non-responsiveness of other department's non-implementation of audit recommendations.
5. Determine how expertise for auditing specific functions, such as signal inspection, is evaluated to ensure the quality of the internal audit.
6. Audits have been properly documented and include references for documents and activities reviewed criteria for evaluation, and notes to support findings and recommendations.
7. The Annual Report is accompanied by a letter from the Director stating SCASs compliance status with its SSPP and/or corrective actions for elements determined not to be in compliance.
8. Corrective actions to address findings from the audit were scheduled, implemented, and tracked.

RESULTS/COMMENTS

Activities:

Staff interviewed SCAS representative who was in charge of the Internal Safety Audits and noted the following.

1. SCAS has developed a three-year internal safety audit schedule for the 21 elements of its SSPP as required by GO 164-D. A formal letter to CPUC dated February 10, 2012 from SCAS was reviewed.
2. The three-year cycle defines the following years 2012, 2013 and 2014. CY 2012 is the first year of audits being performed since SCAS started revenue service in October 2011; SCAS staff audited 6 of its SSPP elements (6, 12, 15, 16, 19 & 20) in September 2012 and the final draft checklists are work in progress. The rest of the elements will be audited in the following two years i.e. 2013 and 2014 as scheduled.
3. Yes, the draft audit checklists for elements 6, 12, 15, 16, 19 & 20 were reviewed. The Method of Verification is referred to as "Audit Action Activities" and the Reference Criteria as "Audit Criteria".

4. SCAS has a process in place where the final draft checklists of the elements being audited should be provided within 30 days from the date of the audit. Also, before the audit a draft checklist is prepared in advance for discussion between SCAS and BTH staff to cover all basis of the audit. The final drafts of completed audit checklists were not available for review because these were still being prepared by the auditors and will be due mid October 2012.
5. SCAS has a computer based program that tracks all elements to be audited, all required reference criteria pertaining to that audit element, and other reference materials that would be helpful to conduct these audits in the future. The auditors are given reference materials in advance that help understand and prepare auditing specific functions in the system and also internal meetings are held to ensure the quality of the internal audits.
6. The final drafts of six completed audit checklists that were performed in the mid-month of September 2012 were not available for review and these are anticipated to be completed by mid of October 2012.
7. SCAS began their first internal safety audit program in the year 2012 and so no annual report was available for review but the annual report shall be due to CPUC before February 15, 2013 and shall be accompanied by a letter from the Director stating SCASs compliance status with its SSPP and/or corrective actions for elements determined not to be in compliance. However, CPUC did receive a letter dated February 10, 2012 from the Director stating no update or modification is required to its SSPP or SSP.
8. Final draft checklists of completed audits in 2012 are anticipated in mid-October 2012. Therefore, no corrective actions to address findings from the audit were scheduled, implemented, and tracked.

Findings:

None

Recommendations:

None

Suggestion: SCAS should consider in the future extensions avoiding having more than one audit on the same day. If SCAS could schedule its elements to be audited throughout the year I think it would be more quality ensured.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	13-A	Subject	Rules Compliance
Date of Review	October 02, 2012 @9a; Conf Rm: #3 BTH Break Rm	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC), SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Don Filippi	SCAS/BTH Person(s) Contacted	BTH – Brad Bonn SCAS – David Delemos

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's APM System Contractors Operations Rule Book
4. SCAS's APM System Contractors Personal Electronic Device Usage Restrictions Policy

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Rules Compliance

Conduct the necessary interviews and review appropriate records prepared during the last year to:

1. Verify SCAS's APM contractor performs formal observations of controllers as specified in the SSPP.
2. Verify SCAS's APM contractor performs observations of maintenance employees as specified in the SSPP and/or referenced or supporting procedures.
3. Verify that both operations and maintenance employees are evaluated based on their performance during unannounced observations to determine their compliance with safety rules, procedures, and/or practices.
4. Determine if any accidents were caused by failure of operations and procedures and verify corrective actions implemented.
5. Determine how SCAS's APM contractor performs efficiency tests of operating and maintenance personnel and verify corrective actions for rule violations.
6. Verify if SCAS SSC receives reports from the APM contractor Operations and Maintenance Department regarding the performance of rules checks, assessments, and testing? Are hazards identified from the rules compliance process and reported to SCAS SSC, managed through the hazard management process.
7. At random, select several operating procedures and verify that these rules are being followed. Also, conduct a random sample of controllers to determine if they are carrying their operating rules, if they have the proper safety equipment, and if their radios are functioning, and verify that they do not possess any personal electronic equipment visible in the Central Control operator's desk such as cellular phones, MP3 players, pagers, etc. as per SCAS rules.

RESULTS/COMMENTS

Activities:

Staff reviewed SCAS's SSPP Section 13, and verified if SCAS was complying with internal procedures.

Staff observed six employees on the SCAS system to verify rules compliance during revenue operations. Staff observed the employees following all applicable rules and regulations. The employees were observed and staff verified that they were in possession of a radio, rulebook, and proper Personnel Protective Equipment.

Staff observed two Controllers during revenue operations, staff verified that the employees were familiar with all applicable rules and regulations governing their work related duties. Staff did not observe any use of Personnel Electronic Devices during these observations.

Staff also verified that there were no documented accidents on record at SCAS APM.

Findings:

1. Staff noted that there were no formal records of operational evaluations documented for any of the employees at SCAS APM as required in the SSPP, Section 13.
2. Staff noted that there was no evidence of a formal checklist used to document compliance checks as required in the SSPP, Section 13.
3. Staff was not given, nor did SCAS have knowledge of any Operations Compliance Program as required in the SSPP, Section 13.
4. Staff noted that these evaluations were not being conducted monthly, quarterly, and yearly as required in the SCAS SSPP, Section 13.

Recommendations:

1. SCAS should clearly outline the operational evaluation procedures for all employees.
2. SCAS should verify through internal auditing procedures that all SSPP requirements are being met.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	13-B	Subject	Rules Compliance Operation Safety Compliance Program Inspection – CPUC Operating Inspector
Date of Review	October 03, 2012 @1p; Conf. Rm: #3 BTH Break Room	Department(s)	Safety and Security Committee (SSC), SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Don Filippi	SCAS/BTH Person(s) Contacted	BTH – Brad Bonn SCAS – David Delemos

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's APM System Contractors Operations Rule Book vA
4. SCAS's APM System Contractors Access Control Plan
5. SCAS's APM System Contractors Personal Electronic Device Usage Restrictions Policy
6. Standard Operating Procedures
7. Interview with Controller

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Rules Compliance: Operation Safety Compliance Program Review – CPUC Operating Inspector

Interview SCAS's APM contractor responsible for Operations Safety, observe/inspect operations, and review documentation as necessary to determine whether or not:

1. Maintenance Workers
 - a. Observe access authority provisions and procedures for workers to determine whether or not they are following the Rule Book.
 - b. Interview at least two workers to evaluate their knowledge and understanding of SCAS's APM contractor Rules and Procedures for mainline operations.
2. Controllers
 - a. Applicable reports, logs or records are properly prepared, maintained, and available upon request for review.
 - b. Duties are performed in accordance with the Standard Operating Procedures, Bombardier Rule Book and Bulletins.
 - c. Bombardier controllers are knowledgeable in dealing and coordinating with others during incidents, accidents, and emergency response situations.

RESULTS/COMMENTS

Activities:

Staff observed six employees performing daily tasks, staff noted that all of the employees were complying with SCAS rules and procedures.

Staff interviewed four employees, staff noted that the employees were familiar with SCAS procedures and had a very good understanding of all applicable rules.

Staff reviewed Controller Logs, Fault Logs, and Turn Over Logs during the observations. Staff noted that all of the logs reviewed complied with SCAS procedures.

Staff noted that the SCAS SSPP, Section 1.4 does not reference the correct Rule Book.

Findings:

SSPP, Section 1.4 references an incorrect Rule Book.

Recommendations:

SCAS should correct the SSPP to reflect the proper Rule Book.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	14	Subject	Facilities and Equipment Inspections
Date of Review	October 03, 2012 @ 9a (1.5 hrs); Conf. Rm: #3 BTH Break Room	Department(s)	Safety and Security Committee (SSC), SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Jimmy Xia	BTH Person(s) Contacted	BTH – Nicholas Kovalev, Brad Bonn, SCAS – David Delemos, Kathy Sutton

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. APM System Contractors Monthly / Weekly Facility Inspections
4. APM System Contractors Site Safety Walk Inspection records
5. Safety and Security Committee Tracker

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Facilities Equipment Inspections and Maintenance

Conduct the necessary interviews and review appropriate records prepared during the last year to:

1. Determine if the required facilities inspections were performed.
2. Determine if inspections were properly documented and noted discrepancies were corrected in a timely manner.
3. Determine if potential hazards found during inspections are tracked from recommendation, corrective action(s), and implementation.

RESULTS/COMMENTS

Activities:

Staff interviewed the BTH representatives in charge of BTH's facilities/equipment inspections and reviewed the completed inspection forms for BTH's facilities/equipment for the following inspections: 11/9/11, 12/9/11, 1/9/12, 2/9/12, 3/9/12, 4/9/12, 5/9/12, 6/9/12, 7/9/12, 8/9/12, and 9/9/12.

Staff interviewed both the BTH and SCAS representatives regarding the process for tracking potential hazards found during facilities and equipment inspections and the process for the APM System Safety and Security Committee meetings, which are held on a monthly basis. Staff also reviewed the Sacramento International Airport APM Safety and Security Committee tracking matrix dated 7/31/12 that shows all items noted from the first committee meeting to the 7/31/12 meeting and the matrix dated 9/24/12 with the closed items hidden.

Staff noted the following:

1. BTH's facilities and equipment inspections are set up once a month on the 9th of each month in BTH's MAXIMO computer program for tracking all system preventative maintenance (PM), inspections, and corrective maintenance.
2. During the last year, the required facilities/equipment inspections were performed on a monthly basis in accordance with the frequency of inspections set up in MAXIMO. The next inspection is scheduled for 10/9/12.
3. The facilities and equipment inspections were properly documented on the inspection forms printed out

from MAXIMO.

4. Typically, the APM contractor or Bombardier Site Manager reports discrepancies found from their facilities and equipment inspections to SCAS's maintenance call center and Facilities Coordinator if SCAS owns the items with the discrepancies. SCAS will enter the defects into its SAP computer program for tracking all defects in all Sacramento International Airport facilities and equipment, where these will be logged with unique numbers. Then, the defects will be distributed to the appropriate departments to get fixed. Bombardier will remind SCAS to fix the defects reported to them on a regular basis until they get fixed. When SCAS fixed these discrepancies, they will notify Bombardier. If Bombardier owns the item in question, they will enter the discrepancy in MAXIMO and resolve it themselves.
5. If defects found from previous inspections are fixed, the subsequent inspection will find the item(s) with the defects to be okay or verify that the defects are indeed fixed. If a defect from a previous inspection is not fixed, Bombardier will report the same defect repeatedly on the forms for subsequent monthly inspections until it is fixed.
6. There is a white board with a list of general open issues for Bombardier written on it in the Bombardier maintenance shop office. Occasionally, some facilities and equipment defects found from any Bombardier employee's observation or inspections are written on the white board. The defects remain written on the board until they get fixed. Bombardier will erase the defects on the board when they are fixed.
7. For the defects that Bombardier reports to SCAS, SCAS addresses the defects according to the level of priority designated by 1, 2, and 3 with 1 being the highest priority or meaning the issue is safety critical and 3 being the lowest priority. The time frame to correct the defects depends on staff availability, funding, severity of the issues, and priority rating.
8. All of the discrepancies noted on the forms for BTH's monthly facilities and equipment inspections conducted during the time period from 11/9/11 to 8/9/12 were corrected in a timely manner.
9. There are two defects noted on BTH's facilities and equipment inspections form for the 9/9/12 inspection that don't directly impact the function of the APM. Bombardier notified SCAS of the two defects and they are SCAS's responsibility for fixing. According to SCAS Facilities Coordinator, one of the two defects has been fixed, and the other defect is being tracked by SCAS using its SAP computer program and is in the process to be resolved in a timely manner.
10. According to SCAS representatives, potential hazards found during inspections are tracked through BTH's MAXIMO program or SCAS's SAP program depending on who is obligated to fix them. Also, BTH staff meets with the SCAS Facilities Coordinator on a weekly and monthly basis where potential hazards found during inspections are reported to him if any. These hazards can occasionally be tracked on the Safety and Security Committee Tracker if BTH feels that the committee should be advised of the hazards. Typically, if BTH identifies an issue from inspections, they enter it in MAXIMO, report it to the SCAS Facilities Coordinator, and can fix it as soon as possible. If they need additional resources, they ask SCAS for support to fix the defect. It is a joint effort between BTH and SCAS to fix the defects found from inspections. BTH can choose to report issues they find from inspections to the committee during the committee meetings depending on relevancy and urgency. Most of the time, the defects will be corrected before the committee meetings. If BTH reports defects during the committee meetings, that will be recorded on the tracker. If a defect is closed, it will be noted on the tracker. If a defect is still open, then it will be noted on the tracker as open and will remain on it until it is resolved. Usually, defects noted on the tracker will be fixed in a timely manner or as soon as possible if the defect impacts the operation of the APM system.

Findings:

None

Recommendations:

None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	15 - A	Subject	Maintenance Audits and Inspections – CPUC Signal Inspector
Date of Review	October 01, 2012	Departments	SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Thomas Govea	BTH Persons Contacted	BTH – Nicholas Kovalev

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's APM System Contractors Maintenance Management Information System
4. SCAS's APM Equipment and Vehicle Equipment Manuals

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Maintenance Audits and Inspections -CPUC Signal Inspector

1. Signal System Inspection
 - a. Perform detailed inspections of the signal system and components to determine whether or not they are in compliance with the applicable reference criteria.

RESULTS/COMMENTS

Activities:

1. Staff performed visual inspections and review records as appropriate to determine whether or not the APM central control equipment, Wayside ATCS system, ORS Communication, and MIMS have been maintained as required and all preventive and corrective maintenance practices comply with the requirements of SCAS's APM System Contractors Maintenance Management Information System.

Findings:

- Monthly Test for April 2012 was not performed
- MIMS maintenance record keeping program is duplicating reports that gives the impression maintenance testing is delinquent.
- Central Control Two week testing is being performed weekly
- RATC Cabinet Airside, PN 150B 400 ohms Vital Relays A7-URP-K12 test date shows tested 7/18/08, A7-URP-K13 test date shows 7/22/08, A7-URP-K8 test date 7/21/08 and A7-URP-K9 test date 7/16/08, Staff will review relay test records (CL #15C)
- ORS cabinet wego buss termination TB1 – 35 & 38 T wires not tagged.

Recommendations:

None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	15 - B	Subject	Maintenance Audits and Inspections – Train Inspection - CPUC Equipment Inspector
Date of Review	October 02 and 03, 2012	Department(s)	SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Michael Borer	BTH Person(s) Contacted	BTH – Nicholas Kovalev and Brad Bonn

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's APM System Contractors Maintenance Management Information System
4. SCAS's APM Vehicle Equipment Manual

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Maintenance Audits and Inspections – Train Inspection - CPUC Equipment Inspector

1. Perform detailed inspections to determine if Bombardier is properly and adequately maintaining:
 - a. Axle Mounted Gearbox
 - b. Truck, axle, and wheel assemblies
 - c. Brake systems
 - d. Door Assemblies
 - e. Lighting
 - f. Passenger doors
 - g. Passenger component and safety appliances
 - h. Public address and intercom systems
2. Based on the review and the inspections, determine whether or not the cars are in compliance with the applicable reference criteria.

RESULTS/COMMENTS

Activities:

Staff conducted equipment inspections and Maintenance records on October 02 and 03, 2012 at SCAS.

Staff also performed detailed inspections to determine if Bombardier is properly and adequately maintaining. Axle Mounted Gearbox, Truck, axle, and wheel assemblies, Brake systems, Door Assemblies, Lighting, Passenger doors, Passenger component and safety appliances, and Public address and intercom systems.

Staff inspected random sample of mechanical records that included Bi-daily, Weekly, and Monthly Inspections. Air Train personal worked very well with staff, when staff requested maintenance records they were presented promptly.

Staff conducted inspections on the following:

Car # 101 - No Defects

Car # 102 - No Defects

Staff also observed SMF APM personal perform an outbound inspection. SMF APM personal performed the

inspection in a very professional manner.

Findings:

None

Recommendations:

None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	15-C	Subject	Equipment Maintenance Program, Signal Systems Including Maintenance, and Vital Relays Maintenance – Records Review
Date of Review	October 02, 2012	Department(s)	SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Tom Govea	BTH Person(s) Contacted	BTH – Nicholas Kovalev

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's APM System Contractors Maintenance Management Information System
4. SCAS's APM Vehicle Equipment Manual

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Equipment Maintenance Program, Signal System and Vital Relays Maintenance – Records Review

Randomly select 4 vital relay preventive maintenance (PM) inspection records from the past 12-months to determine if:

1. Vital Relay Maintenance
 - a. Bombardier conducted inspections at the required frequencies.
 - b. Inspections were properly documented.
 - c. Defects found were closed out in a timely manner.

RESULTS/COMMENTS

Activities:

Staff requested to review Vital Relay Records to determine whether or not and all preventive and corrective maintenance practices comply with the requirements the SCAS's APM System Contractors Maintenance Management Information System, Wayside ATCS system Section 4.3.5 Vital Relay Operating Characteristics Testing

Findings:

- a. No Records were provided, noncompliance to General Order 164D.
- b. No records of vital relays in field, location, serial number for tracking purposes.
- c. No Vital Relay Testing performed prior to start-up to provide the starting point for all future checks as required in Sacramento International Airport Terminal Modernization Program APM Wayside ATC System Manual 4.3.5

Recommendations:

1. SACS should develop a data sheet to identify where each vital relay is located with serial numbers and date of required test last performed.
2. SACS should follow developed SOP outlined in Sacramento International Airport Terminal Modernization Program APM Wayside ATC System Manual 4.3.5 and perform the vital relay test on all vital relays, which

are now considered pass due.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	15-D	Subject	Data Transmission System Maintenance – CPUC Inspector
Date of Review	October 01, 2012	Department(s)	SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Tom Govea	BTH Person(s) Contacted	BTH – Nicholas Kovalev

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's APM System Contractors Maintenance Management Information System
4. SCAS's APM System Contractors Data Transmission System Manual

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Data Transmission System Maintenance – CPUC Inspector

Perform visual inspections and review records as appropriate to determine whether or not the APM data transmission system has been maintained as required and all preventive and corrective maintenance practices comply with the requirements of SCAS's APM Data Transmission System Manual CDRL 71_DTS.

RESULTS/COMMENTS

Activities:

Staff performed a visual inspection at both Airside (Concourse) and Landside, Data Transmission Systems Equipment rooms and reviewed test records to determine whether or not the APM data transmission system has been maintained as required and all preventive and corrective maintenance practices comply with the requirements of SCAS's APM Data Transmission System Manual CDRL 71_DTS.

Findings:

- DTS Preventive Maintenance 4.2.1 Cleaning and inspecting Data Transmission System Cabinet Equipment, A to H to be performed every three months. Currently these tests are being recorded and performed semiannual. This adjustment was due to the sensitive equipment and wiring in these cabinets, minimizes disruption to equipment. Staff visual inspection saw just a little bit of debris in Airside DTS cabinet floor.
- DTS Preventive Maintenance 4.2.2 Diagnostic Computer Air Flow Check. Once a month check was not performed April of 2012, Staff visual inspection of Diagnostic Computer Air Flow Check and no discrepancy noted.

Recommendations:

SACS should have Bombardier review and/or revise the Sacramento International Airport Terminal Modernization Program APM Data Transmission System Manual, to determine whether or not the scheduled maintenance adjustment is acceptable.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	16	Subject	Training and Certification Program for Employees and Contractors
Date of Review	October 03, 2012 @3p; Conf. Rm: #2 BTH Offices	Department(s)	Safety and Security Committee (SSC), SCAS's APM System Contractor
CPUC Reviewers/Inspectors	Don Filippi	BTH Person(s) Contacted	BTH - Adam Williams, Michael Russ, Brad Bonn

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's APM System Contractors Training Documentation
4. Cal-OSHA Safety Orders
5. SCAS's APM System Contractors Tool Box Meeting Records

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Training and Certification Program for Employees and Contractors

Interview SCAS and SCAS's APM System Contractor representative(s) in charge of Controllers, Maintenance, and signal maintenance employees Certification Programs. Review appropriate records to determine whether or not:

- o The employee has completed the initial training program, refresher, and remedial training as necessary.
- o The employee has been recertified at the correct frequency and currently meets the criteria to perform his/her duties.

RESULTS/COMMENTS

Activities:

Staff reviewed training records for seven employees between the months of 9/11/11 and 9/2012. Staff found that six of the seven met the training requirements outlined in the SCAS SSPP, Section 16, as well as the Training Plan, Section 10.

Staff noted that employee # 200002 did not receive the required Rules Training; this was in direct conflict with SCAS policy.

Staff noted that the SDC Training Manual does not outline the initial training procedures for new employees. Additionally, the manual references an out of date training schedule and the SSPP, Section 1.4 references an incorrect Training Manual.

Findings:

- Employee # 200002 was not given rules training as outlined in the training procedures.
- There is not an outlined procedure for training new employees. There is not a distinction between refresher training given to existing employees and complete training given to new employees. CDRL # 74, Section 10 briefly discusses new employees and then notes the refresher training for employees. This

manual should describe all forms of training and how that training will be executed, in detail.

- The training schedule in the training manual is outdated. (CDRL # 74, Section 6)
- The Training Manual referenced in the SCAS SSPP, Section 1.4 is not the manual currently being used. The SDC Training Manual (002550) is not mentioned in the SSPP. What Training document is in effect?

Recommendations:

1. SCAS should ensure that all employees are trained according to their current procedures.
2. SCAS should develop a training program that defines a program specifically for new employees.
3. SCAS should have the most current training schedule referenced. The schedule should display the applicable training dates or use general terms applicable to all years. (CDRL # 74, Section 6).
4. SCAS should update the current SSPP to reflect the correct Training Manual.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	17	Subject	Configuration Management and Control
Date of Review	October 01, 2012 @1pm; Conf. Rm: #2 BTH offices	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC), SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Rupa Shitole	SCAS/BTH Person(s) Contacted	BTH - Brad Bonn (SDC Manager) SCAS - David Delemos (Facilities Coordinator)

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's SMF APM Modification / Change Request Form
4. SCAS's APM System Contractors System Configuration Management Plan

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Configuration Management

1. Randomly select two recent changes pertaining to the APM system at SCAS during the last year to ensure configuration management documentation was properly updated to include at a minimum:
 - a. As-built drawings.
 - b. As-built specifications.
2. Randomly select a Project Concept Submitted to SSC which and verify that:
 - a. SMF APM Modification / Change Request forms were used.
 - b. Forms were circulated to the SSC.
 - c. SSC performed a review, analysis, and approval of form by completing the SMF APM Modification / Change Request form for project.
 - d. The change was reviewed and approved by SCAS's Director or Deputy Director of Operations & Maintenance.
 - e. Change was circulated to the proper departments for implementation.
 - f. All necessary parties or contract employees within or outside the agency were properly notified about the change.

RESULTS/COMMENTS

Activities:

Staff interviewed SCAS and BTH representatives who are in charge of the Configuration Management process and noted the following since SCAS started revenue operations in October 2011.

1. No changes were made to the APM system at SCAS during the last year. The system uses Temporary Change Authorization (TCA) Form during primary request and Field Modification Instruction (FMI) Form during final request. Staff reviewed some samples of these forms being utilized:
 1. FMI # SIAA 006 (Vehicle Buffer Adapter)
 2. FMI # SIAA 011 (RNET Software Release)
2. Staff reviewed the project concept related to Document Number APM 2012-002 Tracker #3 (APM Response to Fire Alarm Activation Reconfiguration) dated March 20, 2012.
 - a. SMF APM Modification / Change Request form was used.
 - b. Forms were circulated to the Safety and Security Committee (SSC) as required.

- c. SSC performed a review, analysis, and approval of form by completing the SMF APM Modification / Change Request form for this project on March 5, 2012.
- d. The change was reviewed and approved by SCAS's Director or Deputy Director of Operations & Maintenance on April 23, 2012.
- e. Change was circulated to the proper departments for implementation.
- f. All necessary parties or contract employees within or outside the agency were properly notified about the change. This change request has been reviewed and approved by the Aircraft Rescue and Firefighting Section.

Findings:

None

Recommendations:

None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	18	Subject	Local, State, and Federal Requirements and Employee Safety Program
Date of Review	October 02, 2012 @1p; Conf. Rm: #2 BTH Offices	Department(s)	SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Jimmy Xia	BTH Person(s) Contacted	BTH: Brad Bonn, Nicholas Kovalev

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. Cal-OSHA Safety Orders
4. SCAS's APM System Contractors Tool Box Meeting records
5. SCAS's APM System Contractors All Employee Meetings (AEM)
6. SCAS's APM System Contractors Safety Concern Hazard Near Miss program

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Local, State, and Federal Requirements for Employee Safety Program

Conduct the necessary interviews and review appropriate records to determine if:

1. SCAS's APM contractor held monthly meetings on safety issues.
2. An appropriate procedure and reporting form is being implemented and is periodically distributed to all employees to effectively report safety hazards in the work place.
3. Required corrective actions have either been satisfactorily completed or are being actively tracked and documented.

RESULTS/COMMENTS

Activities:

Staff interviewed Bombardier staff and reviewed Bombardier's documentation for the Employee Safety Program that incorporates the applicable local, state, and federal requirements including the following:

1. SCAS's APM System Contractors monthly All Employee Meetings attendance sheets, agendas, minutes, and presentation slides for the meetings conducted from March to September 2012
2. The document with a list of the topics for Bombardier's tool box safety meetings and the dates of the meetings and the attendance sheets and the binder with the meeting materials for all meetings conducted from January to September 2012
3. Bombardier's System HSE Safety Concern/Hazard and Near Miss (SCHNM) Report Forms for the closed SCHNMs dated 1/6/12, 1/16/12, 3/7/12, and 8/21/12 and the forms for the open SCHNMs dated 3/4/12, 7/2/12, 7/9/12, 7/14/12, and 8/21/12
4. SMF SDC – Safety Concern, Hazard & Near Miss Data – 2012 matrix, revision 7/19/2012

Staff noted the following:

1. Bombardier has the following two meetings that cover safety issues: 1) monthly All Employee Meetings (AEMs); 2) weekly tool box safety meetings.
2. Bombardier started to hold the monthly AEMs since March 2012. The topics in these meetings are discussed while following the presentation slides shown to the attendees during the meetings. The AEMs include a portion on Health Safety and Environment (HSE) and Safety Concern Hazard Near Miss (SCHNM) information, which are related to employee safety issues. These topics are included in the

presentation slides for the AEMs.

3. Also, Bombardier started to hold the weekly tool box safety meetings that cover safety issues at the work place for its employees since January 2012. Generally, Bombardier intends to hold these meetings on a weekly basis, but there were some meetings that were not held during the period from January to June 2012, probably because the technician who is in charge of these meetings was not available for the meetings that Bombardier missed or he might not have time to get to them due to some other job priorities. Only three weekly tool box safety meetings were held in September 2012, because the technician in charge was off during the final week of September. In the early stages, Bombardier didn't stay on top of these meetings very well. Since July 2012, they started to stay on top of these meetings well.
4. Bombardier keeps the binder with the tool box safety meeting materials in the Control Center room, so every employee can access it.
5. All of Bombardier's records for their AEMs and tool box safety meetings are in order. Based on staff's review of these records, staff found that during the period from January to September 2012, Bombardier held the AEMs on a monthly basis and that they usually held the tool box safety meetings on a weekly basis as required with the exceptions mentioned above during the early stages of these meetings.
6. Bombardier has the Safety Concern/Hazard/Near Miss Report Decision Making Flowchart that serves as the procedure for reporting safety hazards in the work place and the Health, Safety, and Environmental Dangerous Situation/Near Miss Report form. These are implemented. Bombardier has hard copies of these available at the Control Center and electronic versions of these available on their site server. Bombardier employees and visitors from the public can fill out the form mentioned above when there is anything that concerns them in safety perspective around the APM facilities.
7. When Bombardier employees want to fill out the form mentioned above, they can get it at the Control Center or print it out from the employee computers on site. When someone from the public has something to bring to SCAS's attention, they can meet with SCAS personnel and fill the form out or they can describe their concerns to SCAS personnel and Bombardier will fill out the form to carry on their concerns. Bombardier uses the same procedure as shown on the flow chart mentioned above for any concerns brought forward by anyone.
8. Bombardier generates a matrix titled "SMF SDC – Safety Concern, Hazard & Near Miss Data" to track and document corrective actions for every year. They use their System HSE Safety Concern/Hazard and Near Miss (SCHNM) Report Forms to document the progress of the completion of corrective actions. The form gets populated as the situation gets addressed.
9. Nine SCHNMs have been introduced since SCAS APM system started revenue service since 9/28/11. The SMF SDC – Safety Concern, Hazard & Near Miss Data – 2012 matrix, revision 7/19/2012, shows the status of seven of these nine SCHNMs. This matrix is not up to date. According to Bombardier staff, they will update the matrix within a week of the date of this checklist review. Bombardier closed four SCHNMs and five are open as of the date of this checklist review. The corrective actions for two of the five open SCHNMs, dated 3/4/12 and 8/21/12, have been completed, but they haven't been signed off. Bombardier just needs approval/acceptance from the originators of these two SCHNMs in order to close them. The SCHNMs dated 7/2/12, 7/9/12, and 7/14/12 are partially addressed, still open, and pending resolution. The remaining open SCHNMs are being tracked and documented on the matrix and report forms mentioned above through closure.
10. For 2013, Bombardier will generate a SMF SDC – Safety Concern, Hazard & Near Miss Data matrix that will include any open SCHMNs from 2012, which will carry over to the 2013 matrix.

Findings:

None

Recommendations:

None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	19	Subject	Hazardous Materials Programs
Date of Review	October 02, 2012 @ 2:30p; Conf. Rm: #2 BTH offices	Department(s)	SCAS's APM System Contractor, SCAS Environmental
CPUC Reviewers/ Inspectors	Jimmy Xia	BTH Person(s) Contacted	BTH: Nicholas Kovalev, Chris Gurd, Brad Bonn, Brent Mitchell

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. BTH Hazard Communications Program and the Blood borne Pathogen Training Program
4. SCAS's APM System Contractors Hazardous Communication Program
5. SCAS's APM System Contractors MSDS
6. SCAS's APM System Contractors Spill Log
7. SCAS's APM System Contractors Monthly / Weekly Facility Inspections
8. OSHA, General Order, Title 8

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Hazardous Materials Programs

1. Select at random 2 Bombardier employees responsible for handling hazardous materials and verify that they have received specific training for reporting requirements, product release or spill, and the response and cleanup of spill incidents.
2. Verify that hazardous materials discharge/spill reports for incidents that occurred during the past year have been prepared and filed.
3. Verify all Material Safety Data Sheets (MSDS) are available to all personnel who handle hazardous materials.

RESULTS/COMMENTS

Activities:

Staff interviewed BTH personnel and reviewed BTH's Hazardous Materials Program documentation including the following:

1. Staff randomly selected the following two Bombardier employees responsible for handling hazardous materials: Chris Gurd and Brent Mitchell. Staff reviewed records that show that they have received specific training for reporting requirements, product release or spill, and the response and cleanup of spill incidents.
2. The DVD on Hazard Communications Program and the Blood borne Pathogen Training Program made by Coastal Safety and Environmental
3. SCAS APM System Hazardous Materials Communication Program document (ID # SMF-HMP-100), dated 9/15/2012
4. OSHA, General Order, Title 8 document dated May 2012
5. SMF (Sacramento International Airport) SDC (Service Delivery Center) Spill Log
6. BTH's binder containing all of their MSDS sheets current as of 9/15/2012

Staff also asked BTH personnel to show him the Bombardier employee computers in their electrical

maintenance room, where they can carry out whatever they have to do on the computers, and the electronic versions of BTH's MSDS sheets on BTH's site server that can be accessed by these computers.

Staff noted the following:

1. Chris Gurd, BTH's Transit Technician, made the SCAS APM System Hazardous Materials Communication Program document available on 9/14/2012. Highlights from this document including reporting requirements, product release or spill, and the response and cleanup of spill incidents were discussed during BTH's weekly tool box meeting on 9/24/12, and it is considered a training on this subject matter.
2. Both Bombardier employees selected, Chris Gurd and Brent Mitchell, attended the meeting regarding hazardous materials as mentioned above on 9/24/12 as shown on the Tool Box Safety Attendance Sheet for that meeting. Therefore, they have received specific training for reporting requirements, product release or spill, and the response and cleanup of spill incidents.
3. The master hard copy of the document mentioned above is available at BTH's Control Center or the electronic version of the document is available on BTH's site server for all employees to review on their own pace.
4. BTH did not have any hazardous materials discharge/spill incidents during the past year and its spill log, which serves as the report template, is blank, so no such reports have been prepared and filed during the past year. If BTH ever has its first hazardous materials discharge/spill incident, they will fill out the fields in the spill log by hand.
5. BTH's MSDS sheets are always available to every employee to review in a binder hung on the wall in the Control Center or in electronic format on the site server, where these can be accessed using Bombardier employee computers in their electrical maintenance room, which is open 24/7.
6. The order of the MSDS sheets in the binder mentioned above are alphabetized and there are tabs for the letters of the alphabets in the binder, so an employee can find the MSDS he/she wants to review in the binder easily.
7. According to BTH staff, as of the date of this audit, the binder with the MSDS sheets is about 95% complete and they don't anticipate to get any new chemicals for which new MSDS sheets will be added to the existing binder in the near future. If they ever get any new chemicals in the future, the MSDS for the new chemicals will be added to the existing binder in alphabetical order.

Findings:

None

Recommendations:

None.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	20	Subject	Drug and Alcohol Program
Date of Review	October 03, 2012 @10:30a; Conf. Rm: #2 BTH Offices	Department(s)	SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Jimmy Xia	BTH Person(s) Contacted	BTH – Brad Bonn, Nicholas Kovalev SCAS – David Delemos

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's APM System Contractors Corporate Drug and Alcohol Policy
4. Employee File Review

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Drug and Alcohol Program

Conduct the necessary interviews and review appropriate records prepared during the last year to:

1. Confirm that the number of employees in safety sensitive positions who tested positive or refused to take the test during the past year was accurately reported.
2. Confirm Bombardier has a policy in place for managing the use of over-the-counter drugs.
3. Randomly select at least one safety sensitive employees who tested positive for drugs or alcohol in the past year and review the appropriate records to determine whether or not:
 - a. The employee was evaluated and released to duty by a Substance Abuse Professional (SAP).
 - b. The employee was administered a return-to-duty test with verified negative results.
 - c. Follow-up testing was performed as directed by the SAP according to the required follow-up testing frequencies of the reference criteria after the employee has returned to duty.
 - d. Consequences for repeat offenders were carried out as required by the reference criteria.

RESULTS/COMMENTS

Activities:

Staff interviewed the Bombardier Site Manager regarding the items as mentioned in the Element / Characteristics and Method of Verification section above and Bombardier's drug and alcohol testing program in general.

1. Bombardier has 13 technicians out of 15 total employees in safety sensitive positions.
2. SCAS's APM System Contractors Corporate Drug and Alcohol Policy, Section 6, describes various types of drug and alcohol tests required that Bombardier administers to its employees. There have not been any cases with positive test results for all of the various types of tests described in the policy, so there are no records of positive test results that staff can review.
3. If an employee is in violation with the procedures in Bombardier's drug and alcohol testing program, tests positive through the testing program, refuses to submit to a drug or alcohol test when required, or fails to report for a drug or alcohol test as directed may be subject to disciplinary action up to and including termination in accordance with Company policy and in accordance with and subject to federal, state, and local laws and regulations.

Staff noted the following:

1. There were no employees that tested positive for drugs and alcohol or refused to take the test during the

past year, so there are no related records as mentioned in the Element / Characteristics and Method of Verification section item 3 above that staff can review.

2. SCAS's APM System Contractors Corporate Drug and Alcohol Policy, Section 8, page 10, details the procedures that employees need to follow in regards to the use of over the counter medications.

Findings:

None

Recommendations:

None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	21	Subject	Procurement Process
Date of Review	October 02, 2012 @11a; Conf. Rm: #2 BTH Offices	Department(s)	SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Steve Espinal	BTH Person(s) Contacted	BTH: Heidi Dressler, Brad Bonn, Nicholas Kovalev

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's APM System Contractors Procurement Quality Assurance Procedures
4. SCAS's APM System Contractors MSDS

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Procurement Process

Conduct the necessary interviews and review appropriate records prepared during the last year to:

1. Verify Bombardier personnel are following the Procurement Policy to ensure that safety issues and concerns are addressed in the procurement process.
2. Adequate procedures and controls are in place to preclude the introduction of defective or deficient equipment into the APM system environment.
3. Adequate procedures are in place to safely deal with defective or deficient equipment in the event these are introduced to the APM system at SCAS.

RESULTS/COMMENTS

Activities:

Reviewed SCAS, SSPP and found it to abide by General Order 164-D. I reviewed the Maintenance Management Information System (MMIS) which inputs at all parts that are used in the SCAS People Mover. The storage facility was inspected it was found to preserve all the new parts and the parts were labeled.

SCAS People Mover does not test new parts prior to installation.

SCAS has many chemicals which require Material Safety Data Sheets (MSDS). BTH has both hard and soft copies of the MSDS.

Observation: Though the contractor BTH has been following SCAS SSPP. BTH has no written procedure regarding procurement and parts tracking. BTH should generate internal procedures regarding parts failures and replacement.

Findings:

None

Recommendations:

None

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	22	Subject	Hours of Service: Operators and Maintenance, and Track
Date of Review	October 01, 2012 @2p; Conf. Rm: BTH Offices	Department(s)	SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Don Filippi	BTH Person(s) Contacted	BTH: Heidi Dressler, Brad Bonn

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's APM Time Cards

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Hours of Service: Controllers, Train Operators & Maintainers

1. Randomly select three employees. Review the selected employees' "time on duty" records prepared during a three-month period within the past 12 months and determine if:
 - a. They complied with the requirement that employees in safety-sensitive positions may not remain on duty for more than 12 consecutive hours, or for more than 12 hours spread over a period of 16 hours, and;
 - b. The initial on duty status for each of these employees only began after eight consecutive hours off duty.

RESULTS/COMMENTS

Activities:

Staffed reviewed hours of service records for all employees from 9/11/11 through present day, staff found all of the records were consistent with SCAS policies and procedures. Additionally, the records were consistent with General Order 143-B, Section 12.04.

Note: Forms should be clear of white out, scribbles, and unreadable notations. Employees should use one line to cross out an entry and initial the change.

Findings:

None.

Recommendations:

None.

2012 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO COUNTY AIRPORT SYSTEM

Checklist No.	23	Subject	Contractor Safety Program
Date of Review	October 02, 2012 @8a; Conf. Rm: #2 BTH Offices	Department(s)	Sacramento County Airport System (SCAS) Leadership, Safety and Security Committee (SSC), SCAS's APM System Contractor
CPUC Reviewers/ Inspectors	Don Filippi	BTH Person(s) Contacted	Brad Bonn, Heidi Dressler, Nicholas Kovalev

REFERENCE CRITERIA

1. General Order 164-D
2. SCAS System Safety Program Plan (SSPP)
3. SCAS's APM System Contractors Access Control Plan version __

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Contractor Safety Program

Interview the SCAS representative in charge of the Contractor Safety Program and review SCAS's internal safety audit requirements, audit reports and other records to determine if:

1. SCAS/Bombardier's procedures and practices clearly identify, for the contractors and SCAS managers, that SCAS is in charge and that its contractors and their employees must comply with all established safety rules and procedures and;
2. SCAS/Bombardier procedures establish the range of activities for its monitoring and enforcement of contractor's and contractor employee's compliance with the safety requirements by regular unscheduled and unannounced compliance checks as well as by scheduled periodic audits and inspections
3. SCAS/Bombardier's monitoring and enforcement activities are properly recorded, distributed, and filed.

RESULTS/COMMENTS

Activities:

Staff reviewed SCAS and Bombardier's procedures for Contractor safety. Staff found that SCAS and the Bombardier use internal safety meetings and activity reports to communicate upcoming events, all of the contractor activities are monitored by either SCAS or Bombardier. There is a process internally to inform Bombardier when a contractor may need to be monitored and the internal process requires Bombardier as the lead, to provide one of their employees to protect contractors during revenue operations. Bombardier is the source that provides protection for all contractors during revenue or non-revenue service, under the guidance of SCAS.

Staff was not provided a copy of the System Contractors Access Control Plan. Staff could not adequately determine if all procedures were followed as they relate to this checklist.

Findings:

None

Recommendations:

None