2019
TRIENNIAL
SAFETY REVIEW OF
BAY AREA RAPID TRANSIT DISTRICT
OAKLAND AIRPORT CONNECTOR
(BART OAC)

RAIL TRANSIT SAFETY BRANCH
RAIL SAFETY DIVISION
CALIFORNIA PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102

October 16, 2020

Final Report

Matthew Ames, Director
Rail Safety Division

2019 TRIENNIAL SAFETY REVIEW OF BAY AREA RAPID TRANSIT DISTRICT OAKLAND AIRPORT CONNECTOR

ACKNOWLEDGEMENT

The California Public Utilities Commission's Rail Transit Safety Branch (RTSB) conducted this System Safety Program Review. Staff members directly responsible for conducting the review and inspection activities are:

Daren Gilbert – Program Manager

Stephen Artus – Program and Project Supervisor

Mike Borer – Supervisor, RTOSS

Steve Espinal – Senior Utilities Engineer Supervisor

Colleen Sullivan – Utilities Engineer, Representative to BART OAC

David (Shane) Roberson – Signal and Train Control Inspector

Michael Rose – Associate Transportation Ops Inspector

Sal Herrera - Associate Railroad Track Inspector

Richard Fernandez – Associate Transportation Ops Inspector

James Matus – Associate Railroad Equipment Inspector

Eric Madero – Associate Signal and Train Control Inspector

Joey Bigornia – Utilities Engineer

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Jamie Lau – Utilities Engineer

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Patrick Donnelly – Public Utilities Regulatory Analyst

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1. EXECUTIVE SUMMARY

The California Public Utilities Commission's Rail Safety Division (RSD), Rail Transit Safety Branch (RTSB) conducted an on-site system safety program review of the Bay Area Rapid Transit District (BART) Oakland Airport Connector (OAC) in October of 2019. The review focused on verifying OAC's implementation of its System Safety Program Plan (SSPP), as well as OAC's compliance with State and Federal rules and regulations. This report details staff's investigatory actions, findings, and recommendations. The review revealed areas of non-compliance, as discussed below.

The on-site review was preceded by an opening conference meeting between OAC personnel and Staff, on Monday, October 21. The review took place between October 21 – 25, 2019.

A post-review conference meeting followed the review on August 14, 2020, during which Staff provided OAC personnel with a summary of the review findings. Staff made note of several findings of non-compliance and include recommendations as appropriate. Staff identified six findings of non-compliance. From these findings, Staff issued six recommendations for corrective actions.

Section 2 of this report, titled Introduction, provides a summary of the authority under which CPUC performs the triennial reviews, and presents a brief chronology of the review. Section 3, Background, includes a description of the BART OAC system. Section 4 explains the procedures used by Staff during the System Safety Review. The findings and recommendations are presented in Section 5, organized by source checklist numbers. Finally, the Appendices include the complete set of review checklists with summaries of all review activities and the original comments, findings, and recommendations.

This report reflects Staff's triennial safety review of BART OAC. The BART OAC on-site triennial security review report is contained in a separate Report and is brought before the Commission for approval in a separate Resolution. [1]

[1] Staff's security review and report, *"2019 Triennial Security Review of Bay Area Rapid Transit District Oakland Airport Connector"* is being brought before the Commission concurrently in Resolution ST-238.

2. INTRODUCTION

The Commission's General Order (GO) 164-E *Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems*, and the Federal Transit Administration's (FTA's) Rule, Title 49 Code of Federal Regulations (CFR) Part 674, *Rail Fixed Guideway Systems: State Safety Oversight*, require the designated State Safety Oversight Agencies to perform reviews of each rail transit agency's system safety program at minimum 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-E as well as other Commission safety requirements.

Staff notified BART OAC's Manager by letter, dated September 17, 2019, of the scheduling of the Commission's Safety and Security Reviews to begin on October 21, 2019. The notification letter included the 32 checklists which served as the basis for the Safety Review. The checklists, included in Appendix C, focus primarily on verifying the effective implementation of the BART OAC's SSPP.

The Review began with an opening conference meeting on October 21, 2019, attended by Staff, BART OAC's Manager, and Safety and Security Manager, Doppelmayr Cable Car's (DCC) managers, and supervisors.

Staff conducted the on-site system safety inspections and records review from October 21 – 25, 2019. Staff provided the BART OAC personnel with a verbal summary of any preliminary findings and discussed potential recommendations for corrective actions at the conclusion of each review activity.

On August 14, 2020, Staff conducted a post-review exit meeting with BART OAC's and DCC's managers to verbally convey all the findings from the Review. Staff provided the attendees with a summary of the findings of non-compliance derived from the 32 checklists used to guide the review and discussed the need for corrective actions where applicable.

3. BACKGROUND

The Bay Area Rapid Transit District (BART) began operation on September 11, 1972, with 28 miles of track in Alameda County, servicing Oakland to Fremont. The second segment opened on January 29, 1973, with 12 miles of track extending the service from Fremont to Richmond. The third segment opened on May 21, 1973, with 17 additional miles of track marking the opening of the Concord Line. On November 5, 1973, service began between the Montgomery Street Station in downtown San Francisco and the Daly City Station, adding another 7.5 miles of track to the system. Transbay service began on September 16, 1974, bringing the full 71.5 miles of track of the original core system into service. On May 27, 1976, the Embarcadero Station officially opened for revenue service, bringing the total station count to 34. Additional extensions have occurred over the years to expand the system.

Currently, the BART system operates six lines on 107.2 miles of track with 45 stations. These six lines are:

- Fremont – Daly City Line
- Dublin/Pleasanton – Daly City Line
- Pittsburg/Bay Point- SFO Line/Millbrae Line
- Richmond- Millbrae Line
- Richmond-Fremont Line
- Oakland Airport Connector

Oakland Airport Connector (OAC)

BART's Oakland Airport Connector (OAC), also known as BART to OAK, began revenue operation on November 22, 2014. The system was designed and constructed by Flatiron Construction and Parson Transportation along with Doppelmayr Cable Car (DCC) who designed, manufactured, and supplied the Automated People Mover (APM) system and guideway. DCC now operates and maintains the system as part of a 20-year BART Operations and Maintenance Contract.

The OAC is a fully automated driverless transportation system operating along a 3.2 mile partially elevated, partially at-grade, dual guideway, providing a comfortable and reliable link between the BART Airport Station and the BART

Coliseum Station. The APM system operates with up to four cable propelled, 3-car trains. Each station consists of a single-sided passenger boarding platform with a barrier wall and automatic platform door system separating the passenger platform from the guideway tracks. Near the mid-point of the end stations is the maintenance and storage facility (or Wheelhouse). The Wheelhouse houses administrative offices, the Central Control room, the ropeway drive machinery, and provisions for trains to be stored off of the mainline for maintenance. Two Tow/Maintenance Vehicles allow personnel to perform guideway inspections and maintenance activities, including towing revenue vehicles in and out of service.

The initial system consists of four 3-car trains operating in a pinched loop configuration on two separate lanes. The system is expandable, when built to ultimate capacity (4-car trains), to provide a peak period line capacity of 1900 passengers per hour per direction.

BART OAC's 2016 Triennial Review Recommendations Status

Staff performed the previous triennial on-site safety review in 2016. Staff utilized 27 separate checklists to guide that review and made three findings and three recommendations for corrective actions.

CPUC Resolution ST-202, adopted December 15, 2016, granted approval of Staff's final report and its recommendations, ordering BART OAC to develop appropriate corrective action plans and an implementation schedule. Resolution ST-202 also ordered BART OAC to submit monthly status reports tracking the implementation of these corrective actions through full completion.

BART OAC developed and submitted corrective action plans and an implementation schedule to fulfill each of the recommendations. All corrective action plans related to the 2016 Triennial Safety Review have been corrected, field verified by Staff, and closed out.

4. SYSTEM SAFETY REVIEW PROCEDURE

Staff conducted the 2019 System Safety Review of Bay Area Rapid Transit District Oakland Airport Connector in accordance with Rail Transit Safety Branch Procedure RTSB-4, *Procedure for Performing Triennial Safety Audits of Rail Transit Systems*. Staff developed 32 checklists to cover various aspects of system safety responsibilities, based on Commission and FTA requirements, the BART OAC's SSPP and other safety-related documents, and Staff's knowledge of the BART OAC's operations. The 32 checklists are included as Appendix C of this report.

Each checklist identified safety-related elements and characteristics that were either inspected or reviewed by Staff. The completed checklists include --- findings of non-compliance and --- recommendations pertaining to the BART OAC's SSPP and its procedures, and/or Commission regulations. The methods used to perform the review included:

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

The review checklists concentrated on requirements that affect the safety of transit operations as well as state of good repair.

5. FINDINGS AND RECOMMENDATIONS

The reviewers and inspectors who participated in the On-Site System Safety Review concluded that the BART OAC has a comprehensive SSPP and is effectively implementing it. However, Staff observed six findings of non-compliance and provided six recommendations to improve the system safety program. These findings and recommendations are listed below and grouped by checklist number.

1. **Policy Statement and Authority for System Safety Program Plan: Management (Leadership Involvement and Commitment to Safety)**

   No findings of non-compliance; no recommendations.

2. **System Safety Program Plan Goals and Objectives**

   No findings of non-compliance; no recommendations.

3. **Overview of Leadership Structure**

   No findings of non-compliance; no recommendations.

4. **System Safety Program Plan: Control and Update Procedure**

   No findings of non-compliance; no recommendations.

5. **System Safety Program Plan: Implementation Activities and Responsibilities**

   No findings of non-compliance; no recommendations.

6. **Hazard Management Process**

   No findings of non-compliance; no recommendations.

7. **Safety and Security Certification**

   No findings of non-compliance; no recommendations.

8. System Modification

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. Rules Compliance: Observation and Enforcement

No findings of non-compliance; no recommendations.

13-B. Rules Compliance: Operations Safety Compliance

Findings of Non-Compliance:

Staff found TMV Operator Logs missing "Time Removed" and "OP Initials" on 3/29/2019, 5/08/2019, 7/31/2019, and 10/06/2019. These logs are to show who and the time entering and exiting of the trackway including time and type of lock out for the occurrence. "OP Initials", are the initials of the CCR Controller who verifies the workers have entered with permission and have cleared the trackway.

Recommendations:

Ensure TMV Operator Logs are properly filled out and all employees are safe, in the clear and accounted for with appropriate time and initials.

13-C. Hours of Service: Operators and Maintenance, and Track

No findings of non-compliance; no recommendations.

13-D. Contractor Safety Program

Findings of Non-Compliance:

OAC SSPP does not include CPUC G.O. 164-E Section 3.2 (p) sub-section i-iv which outlines contractor inspections, audits, training, and certification program.

Recommendations:

OAC should ensure CPUC General Order 164-E Section 3.2 requirements are implemented in the next revision of the OAC SSPP.

13-E. Rules Compliance: Operating Rules and Maintenance Procedures Manual & Operations Bulletin Revisions

No findings of non-compliance; no recommendations.

14-A. Facilities and Equipment Inspections

Findings of Non-Compliance:

Staff noted PM records 1M01 Fire Management Systems, OAC conducted a monthly inspection 27 days outside of its normal schedule in the last year (2018). Staff noted for PM records 1M01 Fire Extinguisher, OC conducted three monthly inspections 10, 14, and 11 days out of its normal schedule in the last year (2018). DCC SOP 1M01 & 1M02.

Recommendations:

OAC should conduct PM inspections as scheduled. DCC SOP 1M01 and 1M02.

14-B. Facilities and Equipment Inspections

Findings of Non-Compliance:

Missing documentation for certificate in master tool list and binder. Tool #414600087.

Recommendations:

OAC should implement a program to where they have a designated employee overseeing the tool calibration program. All copies of calibration records must be filed in a master binder for reference.

15-A. Maintenance Audits and Inspections – CPUC Inspector

Findings of Non-Compliance:

Missing maintenance documentation for quarterly inspections in 2018.

Missing HVAC maintenance inspections in 2017

Recommendations:

OAC should keep records on file of all required maintenance inspections to properly document required maintenance practices.

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

No findings of non-compliance; no recommendations.

15- C. Communications Systems Maintenance – CPUC Inspector

No findings of non-compliance; no recommendations.

15- D. Data Transmission System Maintenance – CPUC Inspector

No findings of non-compliance; no recommendations.

16. Training and Certification Programs: for Employees and Contractors

No findings of non-compliance; no recommendations.

17. Configuration Management and Control

No findings of non-compliance; no recommendations.

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

No findings of non-compliance; no recommendations.

19. Hazardous Materials Program

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. General Order 172 – Personal Electronic Device Prohibitions/In-Cab Cameras

Comments:

The emergency contact procedures are outlined in the OAC PED Policy. It is not found, required, in the OAC SSPP.

Findings of Non-Compliance:

CPUC Staff found the OAC SSPP violates CPUC General Order 172 Section 5.2 RTAs shall include or reference their zero-tolerance policy and program in their SSPP and rail operations rules. The OAC SSPP is also missing CPUC General Order 172 Section 7 REQUIREMENTS FOR EMERGENCY CONTACT PROCEDURES: RTAs shall implement procedures by which employees addressed in this General Order can be contacted in the event of a personal or family emergency. These procedures shall include, at minimum, the routing of that contact through a designated person or division within the RTA. These procedures shall be communicated to all affected employees in writing, and copies shall be available to Commission staff and be included or referenced in an RTA's SSPP when it is revised.

Recommendations:

OAC staff should ensure the next revision to the OAC SSPP includes CPUC General Order 172 Sections 5.2 and 7.

23. General Order 175-A – Rules and Regulations Governing Roadway Worker Protection Provided by Rail Transit Agencies and Fixed Guideway Systems

No findings of non-compliance; no recommendations.

Appendices

APPENDIX A. ABBREVIATION AND ACRONYM LIST

Abbreviation or Acronym	Definition
ATC	Automatic Train Control
ATO	Automatic Train Operation
ATP	Automatic Train Protection
CAP	Corrective Action Plan
CAPL	Controlled Assembly Part List
CFR	Code of Federal Regulations
Commission	California Public Utilities Commission
CPUC	California Public Utilities Commission
DCC	Doppelmayr Cable Car
ECN	Engineering Change Notice
FMI	Field Modification Instruction
GO	General Order
GRACIS	Governance, Risk, and Compliance Information System
HSE	Health, Safety, and Environment
ISSA	Internal Safety and Security Audit
LOTO	Lock-Out/Tag-Out
ORS	Operations Radio System
PLC	Programmable Logic Controller
PM	Preventative Maintenance
SCHNM	Safety Concern Hazard Near Miss
SCM	Safety Committee Meeting
SIMS	Site Information Management System
SSPP	System Safety Program Plan
Staff	Rail Transit Safety Branch Personnel

TCA	Temporary Change Authorization
UPS	Uninterruptible Power Source

APPENDIX B.

BART 2019 TRIENNIAL SYSTEM SAFETY REVIEW CHECKLIST INDEX

Checklist No.	Element/Characteristic	Checklist No.	Element/Characteristic
1	Policy Statement and Authority for System Safety Program Plan (Leadership Involvement and Commitment to Safety)	**13-B**	Rules Compliance Operation Safety Compliance Program Inspection – CPUC OPERATING INSPECTOR
2	System Safety Program Plan Goals & Objectives	**13-C**	Hours of Service: Operators and Maintenance, and Track
3	Overview of Leadership Structure	**13-D**	Contractor Safety Program
4	SSPP Control & Update Procedure	**13-E**	Rules Compliance: Operating Rules and Maintenance Procedures Manual and Operations Bulletin Revisions
5	SSPP Implementation Activities & Responsibilities	**14-A**	Facilities and Equipment Inspections
6	Hazard Management Process	**14-B**	Facilities and Equipment Inspections
7	Safety and Security Certification	**14-C**	Facilities and Equipment Inspections: Bridges and Aerial Structures
8	System Modification	**15 - A**	Maintenance Audits and Inspections –CPUC Inspector
9	Safety Data Collection and Analysis	**15 – B**	Maintenance Audits and Inspections – Central Control Equipment - CPUC Inspector
10	Accident/Incident Investigations	**15-C**	Communications System Maintenance – CPUC Inspector
11	Emergency Management Program	**15-D**	Data Transmission System Maintenance – CPUC Inspector
12	Internal Safety Audits	**16**	Training and Certification Program for Employees and Contractors
13-A	Rules Compliance	**17**	Configuration Management and Control

Checklist No.	Element/Characteristic	Checklist No.	Element/Characteristic
18	Local, State, and Federal Requirements and Employee Safety Program	**21**	Procurement Process
19	Hazardous Materials Programs	**22**	General Order 172 – Personal Electronic Device Prohibitions/In-cab Cameras
20	Drug and Alcohol Program	**23**	General Order 175-A – Rules and Regulations Governing Roadway Worker Protection Provided by Rail Transit Agencies and Fixed Guideway Systems

APPENDIX C.

BART 2019 TRIENNIAL SYSTEM SAFETY REVIEW CHECKLISTS

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	1	SUBJECT	POLICY STATEMENT AND AUTHORITY FOR SYSTEM SAFETY PROGRAM PLAN (LEADERSHIP INVOLVEMENT AND COMMITMENT TO SAFETY)
Date of Review	OCTOBER 21, 2019 11:00a – 12:00p	Department(s)	BART OAC Leadership, Safety and Security Review Committee (SSRC)
Reviewers/ Inspectors	Daren Gilbert Steve Artus Mike Borer Steve Espinal Colleen Sullivan	Person(s) Contacted	Mike Forte – BART Superintendent eBART/OAC Systems Anthony Onisko – eBART Safety and Training Manager Orville Riley – DCC Operations and Maintenance Manager Jeff Lau – BART Chief Safety Officer David Murphy – BART Chief Operating Officer of BART OAC/eBART Systems Dean Hurst – DCC General Manager

REFERENCE CRITERIA

1. General Order 164-E
2. BART Oakland Airport Connector (OAC) System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

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

Interview BART Line Manager and Doppelmayr Cable Car (DCC) O&M Manager to determine and discuss:

1. Source, frequency, and depth of safety information provided to the BART Line Manager, whether safety is included as a regular topic at OAC System Safety Review Committee (SSRC) meetings, and whether OAC Safety gives reports at SSRC Meetings.
2. Methods included in the management performance system to facilitate a system safety culture within the organization.
3. Formal meetings held and attended by OAC Leadership to discuss safety performance (such as ongoing evaluation of goals and targets).
4. OAC awareness of high priority safety issues related to operations & maintenance of the Automated People Mover (APM) system.
5. BART Line Manager 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:

1. The BART Superintendent OAC Systems and the eBART Safety and Training Manager attend the monthly Safety and Security Review Committee (SSRC) meetings. The Superintendent and the Safety and Training Manager as well as the Chief Operating Officer are in regular communication with the BART Chief Safety Officer. Any disruption of service over twenty minutes is reported to the BART Chief Safety Officer. The SSCRC meetings have safety goals, summary for the month and a hazard log. Most of the hazards are patron slips and falls on the escalators. Most of the patron problems are due to escalators. DCC has put up safety cones on the bottom of the escalators to reduce these incidents. The BART OAC Chief Operating Officer is informed of any outages and emergency drills. The BART OAC Chief Operating Officer reports OAC safety issues to BART's Chief Operating Officers and to the General Manager.
2. Management DCC's way of incentivizing safety is to give quarterly safety awards to staff. They recognize those who go above and beyond the

parameters. Management regularly inspects the system for safety concerns, reviews accidents, and responds to complaints.3. Safety and Security Review Committee meetings (SSRC) are held monthly.

3. OAC conducts a monthly safety review meeting to review all safety concerns.
4. The BART OAC David Murphy provides weekly and monthly updates to Tamar Allen. BART Superintendent eBART/OAC Systems conducts weekly meetings with DCC staff and is on site at DCC regularly. Anything that rises to the level of a safety concern is brought to management's attention. CPUC staff participates in these SSRC meetings and is provided monthly minutes afterwards. OAC conducts a monthly safety review meeting to review all safety concerns. David Murphy BART Chief Operating Officer of BART OAC/eBART Systems participates in weekly meetings with Tamar Allen. Jeff Lau participates in weekly meetings where they discuss a variety of safety-related issues. There are also quarterly performance reports.
5. Corrective actions are tracked on the hazard log and are updated every month.
6. DCC uses some subcontractors to do work. Subcontractors are provided with safety training.

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	2	SUBJECT	SYSTEM SAFETY PROGRAM PLAN GOALS & OBJECTIVES
Date of Review	OCTOBER 21, 2019 12:30p – 1:00p	Department(s)	BAY AREA RAPID TRANSIT (OAC) Leadership, Safety and Security Review Committee (SSRC)
Reviewers/ Inspectors	Daren Gilbert Mike Borer Steve Espinal Colleen Sullivan	Person(s) Contacted	Mike Forte – BART Superintendent eBART/OAC Anthony Onisko – eBART Safety and Training Manager Orville Riley – DCC Operations and Maintenance Manager Jeff Lau – BART Chief Safety Officer David Murphy – Chief Operating Officer of BART/eBART Dean Hurst – DCC General Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

SSPP Goals and Objectives

Conduct an interview with OAC and review appropriate records to:

1. Determine if the SSPP goals and objectives are evaluated, documented and achieved via a reduction in accidents, hazards, rule violations, safety metrics, etc.
2. Determine how safety performance is reported to the OAC BART Line Manager or Leadership (i.e. monthly, quarterly or annual safety reports).
3. Determine if the OAC BART Line Manager receives sufficient safety information to ensure OAC is meeting its safety goals and objectives. Are rule(s) violations and other key safety measurements being tracked and reported to the BART Line Manager?

RESULTS/COMMENTS

Activities:

1. Safety goals and objectives are monitored and tracked in the SSRC process. SSPP goals and objectives are evaluated, documented and achieved. They are evaluated monthly There are financial incentives.
2. DCC provides the OAC BART Line Manager a briefing on any accident occurrences. Safety performance is reported to the OAC BART Line Manager. The OAC BART Line Manager is usually present at the OAC site.
3. Rule violations and other key safety measurements are being tracked and reported to the BART Line Manager weekly and monthly meetings. The hazard log on SSRC meeting minutes tracks rules violation. SSRC meeting minutes reflect safety goals and objectives.

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	3	SUBJECT	OVERVIEW OF LEADERSHIP STRUCTURE
Date of Review	OCTOBER 21, 2019 1:00p – 1:30p	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC)
Reviewers/ Inspectors	Daren Gilbert Mike Borer Steve Espinal Colleen Sullivan	Person(s) Contacted	Mike Forte – BART Superintendent eBART/OAC Anthony Onisko – eBART Safety and Training Manager Orville Riley – DCC Operations and Maintenance Manager Ignacio Sesma – DCC Operations Service Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Overview of Management Structure

Interview OAC SSRC and review appropriate records to:

1. Determine how OAC's process to integrate safety into OAC operations and maintenance is accomplished.
2. Determine if any safety program deficiencies are a result of inadequate personnel or resources such as difficulties in maintaining schedules for SSPP

updates, completing internal safety & security audits, or performing Accident/Incident investigations.

3. Determine if Safety Department has personnel resources allocated to support interdepartmental coordination on safety issues and concerns.

RESULTS/COMMENTS

Activities:

1. A daily 6 am tailgate meeting is conducted for the morning shift covering safety issues. Training is an established process and procedures. DCC has hired a new position – "Training Coordinator." DCC has corporate training requirements, but each facility has specific needs for training.
2. Resources do not seem to be an issue relating to accomplishing tasks. DCC is meeting its timelines on internal safety and security audits.
3. eBART Safety and Training Manager attends all the emergency drills. He is involved in SSRC meetings and other matters as well. Regarding PTASP, BART is coordinating with OAC and eBART in developing new PTASP rules. This is differentiated in the Appendices. RWP is an example.

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	4	SUBJECT	SSPP CONTROL & UPDATE PROCEDURE
Date of Review	OCTOBER 21, 2019 1:30p – 2:00p	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC),
Reviewers/ Inspectors	Daren Gilbert Mike Borer Steve Espinal Colleen Sullivan	Person(s) Contacted	Mike Forte – BART Superintendent eBART/OAC Anthony Onisko – eBART Safety and Training Manager Orville Riley – DCC Operations and Maintenance Manager Ignacio Sesma – DCC Operations Service Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

SSPP Control & Update Procedure

Interview OAC SSRC and review appropriate records to:

1. Verify the required annual SSPP compliance letter by CEO has been sent to the CPUC for the past 3-years per SSPP Element 4.0.

2. Verify SSPP reviews and changes are comprehensive in scope, within required timeframes, and are approved by the designated staff.

3. 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:

1. There is an annual SSPP review. The OAC has a separate SSPP and separate review and letter. Staff verified that the required annual SSPP compliance letter by CEO has been sent to the CPUC for the past 3-years per SSPP element 4.0.
2. Review of the SSPP is done through the SSRC committee. Each manager and supervisor DCC reviews the SSPP with the form with all 23 elements. They then meet to review the comments together. This is documented on the meeting minutes form. BART System Safety is involved with this process, too. The BART OAC provides the CPUC with a preview of any changes that are made.

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	5	SUBJECT	SSPP IMPLEMENTATION ACTIVITIES & RESPONSIBILITIES
Date of Review	OCTOBER 21, 2019 2:00p – 3:00p	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC)
Reviewers/ Inspectors	Daren Gilbert Mike Borer Steve Espinal Colleen Sullivan	Person(s) Contacted	Mike Forte – BART Superintendent eBART/OAC Anthony Onisko – eBART Safety and Training Manager Orville Riley – DCC Operations and Maintenance Manager Ignacio Sesma – DCC Operations Service Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

SSPP Implementation Activities and Responsibilities

Conduct an interview with OAC SSRC 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:

1. DCC site responsibility matrix specifies who is responsible for leading the update. Review confirms responsibilities are spelled out and distributed to responsible management staff.
2. There are currently no challenges. The SSPP review should address any during their annual review.
3. BART has oversight of DCC (David Murphy, Mike Forte, and Tony Onisko). However, DCC has involved its management for safety-related activities.

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	6	SUBJECT	HAZARD MANAGEMENT PROCESS
Date of Review	OCTOBER 21, 2019 3:30p - 4:30p	Department(s)	Safety
Reviewers/ Inspectors	Steve Espinal Yan Solopov	Person(s) Contacted	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC), OAC Environmental

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC Accident Investigation Procedures

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Hazard Management Process

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

1. OAC 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;
   - OAC / 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. SSRC maintains a mechanism to capture and track identified hazards through analysis and resolution.
3. OAC 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-E).
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.

RESULTS/COMMENTS

Activities:

1) BART OAC Superintendent stated staff conducts weekly and monthly safe walks, visual inspections, and reviews customer emails/phone calls.
2) BART OAC maintains a Hazard Log which includes: Hazard Description, Mils Standard evaluation as dictated in their SSPP, Mitigation Measures, Status and Mitigation Measures Closure Date.
3) All OAC hazards are recorded and updated. The Hazard Log is sent to the CPUC monthly along with the V form.
4) The Mils standard is used in evaluating hazards and is documented on the Hazard Log.
5) Hazards are logged in and tracked through mitigation measures to closure.

Staff reviewed the current BART OAC Hazard Log from 11/22/14 through 9/4/19. There were a total of 78 hazards listed. The vast majority of incidents involve slips and falls on the escalators. The slips and falls on the escalators many times were caused by difficulty with handling luggage. There were two incidents where a Doppelmayr employee ran a red light causing damage to the Tow Maintenance Vehicle (TMV), Guideway Switch Rail and mounts. An engineering design change was requested to BART which would not allow red light violations. The change was approved and carried out by a software change preventing red

light violations. There were also two wayside worker rules violations. Employees encroached on the guideway zone during operation. Both episodes were documented as a Near Miss and the employees were retrained and bulletins issued on Roadway Worker Protection. All hazards including Mitigation Measures and Closure date are included. All but one hazardous condition Mitigation Measures has been closed to date. The one mitigation measure not closed has been recently added to the Hazard Log.

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	**7**	**SUBJECT**	**SAFETY AND SECURITY CERTIFICATION**
Date of Review	OCTOBER 22, 2019 9:00 – 10:00a	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC)
Reviewers/ Inspectors	Rupa Shitole Jamie Lau	Person(s) Contacted	Orville Riley, Operations and Maintenance Manager Dean Hurst, General Manager Michael Forte, Superintendent, eBART/OAC System Tony Onisko, Safety Manger, eBART/OAC

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Safety and Security Certification

Interview the OAC 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 OAC and approved by the Commission.
2. Verify that each Safety Certification Plan was consistent with GO 164-E, OAC SSPP, and OAC 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-E.

RESULTS/COMMENTS

Activities:

Staff interviewed OAC representatives related to Safety and Security Certification and noted the following:

1. The OAC System has had no major projects or extensions during the last 3 years. Therefore, a SC Plan was not required as per GO 164 and OAC SSPP.
2. Refer number 1.
3. Refer number 1.
4. Refer number 1.
5. Refer number 1.
6. Refer number 1.

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	8	SUBJECT	SYSTEM MODIFICATION
Date of Review	OCTOBER 22, 2019 8:00a – 9:00a	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC)
Reviewers/ Inspectors	Steve Espinal Yan Solopov	Person(s) Contacted	Mike Forte, Superintendent, eBART/OAC System

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. DCC Access Control Plan
4. BART APM Modification / Change Request Form/Tracker

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 BART was involved in assessing any system modifications over the last 3 years; 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 SSRC 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 if the modification meets the specifications or project requirements, and if any unauthorized modifications were performed.

RESULTS/COMMENTS

Activities:

1) BART OAC SSPP does adhere to its SSPP regarding system modification. System modification involved both BART and Doppelmayr staff for approval. Both parties agree on the changes. Recently a software change was requested. The change was made by Siemens the company who installed the original software.
2) There were four system modifications in the last three years. BART was involved in all four change request projects. Again, the SSPP was followed.
3) SSRC members from both BART and Doppelmayr were involved in system modification. SSRC members were involved in the proposed changes.
4) Staff found no evidence of unauthorized modifications to the system.

According to the BART OAC Superintendent, "For a proposed system modification, the SSRC would discuss the change request and provide support in assessing whether the modification might introduce any new hazards. In the case of a modification that was intended to correct/mitigate a system hazard (like the TMV/red light change), the SSRC would review to see that it did mitigate the hazard, no new hazards were introduced, and would eventually close the hazard or corrective action after the modification was completed."

Staff reviewed the system change request for the red light control for the Tow Maintenance Vehicle (TMV) and Suppression of Automatic Switchover. Both projects included a Design Change Request form, submitted to BART for review and approval. BART staff and Doppelmayr staff worked together and approved the changes to system. There were no deviations from the SSPP.

Comments:

None.

Findings:

None

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	9	Subject	Safety Data Collection and Analysis
Date of Review	October 22, 2019 9:15 – 10:00am	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC)
Reviewers/ Inspectors	Jamie Lau Rupa Shitole	Person(s) Contacted	Orville Riley – Operation and Maintenance Manager (Doppelmayr) Dean Hurst – General Manager (Doppelmayr) Michael Forte – Superintendent Tony Onisko – Safety Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Safety Data Collection and Analysis

Interview the OAC 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 OAC 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 OAC's Hazard Identification and Resolution Process.
4. The safety data collected and the resulting analyses are made available to OAC departments for use in planning their safety-related activities.
5. Periodic reporting regarding the results of the safety data analysis is provided to the OAC Executive Management as appropriate and how this is reported to the FTA's National Transportation Database (NTD).
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 the BART OAC representatives who are responsible for the Safety Data Collection and Analysis and noted the following:

1. The data concerning OAC accidents and incidents, employee's performance failures, equipment failures, and procedural deficiencies is stored on Hazard Logs. Staff reviewed the Hazard Log dated from year 2014 to present ("20181209_OAC Hazard Log"). All the items on the Hazard log have been closed.
2. Staff reviewed the Hazard Log and found data is supplied by departments including Operations and Maintenance to the Operations and Maintenance Manager, who inputs the data in the tracking log and this data is presented and discussed at the monthly SSRC meetings.
3. The safety data collected is analyzed and incorporated into OAC's Hazard Identification and Resolution Process. Each item is resolved and verified with identified hazard severity and probability level, with appropriate mitigation assigned.
4. Operations and Maintenance Manager distributes the data and informs the appropriate departments. The data is also discussed in monthly safety meetings with CPUC Staff and internal OAC staff meetings with all departments. Every member of the management team receives the data for review on a monthly basis. The Oakland Fire Department and BART Police Department are also involved at the SSRC meetings.
5. Operations and Maintenance Manager shares the data with Executive Management (General Manager) via monthly meetings. OAC's Superintendent is responsible for entering the appropriate data to FTA's NTD on a monthly basis; Staff verified data entering by a screenshot of records sent by the Superintendent.

6. OAC staff demonstrated the OMMIS software to Staff over the screen. The OMMIS tracks all aspects of system performance including system performance, system service availability and service maintainability. Staff visited OAC's central control and verified its Automated Train Supervision software tracks all system faults in an alarm log. The alarm log is continuously monitored by OAC and Doppelmayr.

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	10	**SUBJECT**	ACCIDENT/INCIDENT INVESTIGATIONS
Date of Review	OCTOBER 22, 2019 10:00a – 11:00a	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC)
Reviewers/ Inspectors	Steve Espinal Yan Solopov	Person(s) Contacted	

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC Accident Investigation Procedures

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Accident/Incident Investigations

Interview OAC'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. OAC reported the accidents to the CPUC within two hours as required by GO 164-E, Sections 7.1 & 7.2.
2. The immediately reportable incident notifications to CPUC staff contained all the information required by GO 164-E, Section 7.3.
3. The accident was investigated in compliance with the requirements of GO 164-E, Section 8, and CPUC-approved accident investigation procedures.
4. The final report identified:
   - Each item covered in the investigation.

- The investigation findings of the most probable cause.
- Underlying contributing causes.
- A CAP to address the identified causes and that it minimized the incident from recurring.
- A schedule for implementing the CAP, which has been completed or is being monitored on an on-going basis.

RESULTS/COMMENTS

Activities:

BART OAC has had no incidents which rise to the level of reportable to the CPUC in the previous 3 years.

Comments:

None.

Findings:

None

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	11	SUBJECT	EMERGENCY MANAGEMENT PROGRAM
Date of Review	OCTOBER 22, 2019 3:00p – 5:00p	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC)
Reviewers/ Inspectors	Rupa Shitole Jamie Lau Joey Bigornia	Person(s) Contacted	Orville Riley, Operations and Maintenance Manager (Doppelmayr) Dean Hurst, General Manager (Doppelmayr) Michael Forte, Superintendent, eBART/OAC System Tony Onisko, Safety Manager, eBART/OAC

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. BART System Security Plan (SSP) dated April 6, 2018

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Emergency Management Program

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

1. Solicit an overview of the process for OAC'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 OAC'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 OAC's Emergency Plan and/or procedures? If so, have these corrective actions been implemented with OAC staff and emergency responders?
4. Determine if OAC conducts periodic meetings with sheriff and fire departments in OAC jurisdictions, emergency response agency familiarization activities have occurred as scheduled and corrective actions have been implemented.

RESULTS/COMMENTS

Activities:

Staff interviewed BART OAC representatives responsible for Emergency Management Program and determined the following:

1. Based on the contract requirement, BART OAC conducts a live drill and a tabletop drill every year. The BART OAC Safety and Security Review Committee (SSRC) conduct the following: plan for a drill, select a topic, pre-meetings are conducted to discuss overall plan for the drill, conduct the drill, write a report after the drill related to findings and comments for evaluation. The drills are coordinated with local jurisdiction(s): Oakland Fire Department, Oakland Police Department. The last drill on to October 21, 2018 was a bomb threat with suspicious package on the system (coordinated with K9 unit at the Oakland Coliseum). On March 11, 2019 a "Medical Emergency" drill exercise was discussed at the SSRC meeting. Staff reviewed the Table-Top Emergency Drill "Medical Emergency" Document number OAC-SMS_4011 dated March 4, 2019 (Evaluate emergency procedural actions related to a confirmed medical emergency with passengers heading to the Coliseum). Participants were DCC personnel, BART Police, BART OCC rep, and Oakland Fire Department. Every situation has a checklist, Medical emergency checklist was on file. Tabletop Drill Medical Emergency date of 5-13-2019 (sign in sheet included DCC personnel, BART Police, BART OCC rep, Oakland Fire Department, CPUC, etc.). Preparation meeting dated 9-9-19 (sign in sheet) was reviewed and the Live Emergency drill exercise will be conducted in November 2019.
2. The drill schedule is created on an annual basis or as needed. The SSRC is

involved in all discussions related to any emergency drill exercises, and all external agencies are invited to attend the SSRC. The following drills were reviewed:

2019:

SSRC Monthly Safety Meeting dated 3-11-2019 sign in sheet was reviewed and Section 5: READINESS DRILLS identified the following discussion

1. 2-11-19: Email scenario to SSRC members for discussion prior to 3-11-19 planning
2. 1-7-19: SSRC to do table top
3. 12-10-18: SSRC to continue recommendations of topics for the next drill.
4. 10-22-18: SSRC to make recommendations of topics for next table top drill.

The Table-Top Emergency Drill "Medical Emergency: dated 3-4-2019 was included with the SSRC meeting minutes.

5-13-19: Table Top Drill Medical Emergency: Sign off sheet.

9-9-19: Prep Meeting Sign off sheet

2018:

Staff reviewed the bomb threat with suspicious package on system drill report performed on October 21, 2018. No corrective actions were made to OAC's Emergency Plan. The 2018 drill report concluded a deficiency with staff communication with outside agencies and needed improvements. Staff reviewed a training log titled "Contract No. 01ZK-120" verifying training has been done to update OAC staff to improve clarity of calls with outside agencies.

3. BART OAC staff presented Staff with the sign-in sheet dated 7-25-2019 for the Emergency Management Plan (EMP) to review. The EMP identifies all of the drill scenarios for topics to discuss and there are no revisions necessary to the plan at this time.

Staff also reviewed the all Staff Incident Communication Log Training dated 8-29-2019. The training discussed the proper procedure for recording information on a 5-minute update basis as required by BART. BART letter dated 8-22-2019 to Doppelmayr Cable Company (DCC), discussed the concerns between DCC and BART staff during the 8-20-2019 downtime event which resulted in four corrective

actions. The corrective action plan was for the Communications Log to be was updated and the 8-29-19 training class was for re-training DCC staff for usage of the Communication Log and to ensure DCC compliance with the Contract provisions. All corrective action plans are closed.

4. Minor changes (updating phone numbers) have been made to the current drill checklist and the changes will be made effect for the November 2019 drill. Emergency plan is updated annually as needed and employees are trained on the updates. Random topics are selected, and training is conducted. None of the drills required any significant changes to the emergency plan or other documents.

   Local jurisdictions are invited to monthly SSRC meetings. Staff verified participation after reviewing the 7-25-2019 sign-in sheet which identified attendance from the following: BART Police, Sheriff's Department, and Oakland Fire Department representatives.

Comments:

BART OAC representatives stated the future SSRC meetings will discuss the evaluation and improvements comments from all drill reports, and document corrective actions if necessary.

Findings:

None

Recommendations:

None

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	12	**SUBJECT**	INTERNAL SAFETY AUDITS
Date of Review	OCTOBER 23, 2019 3:00p – 4:00p	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Steve Espinal Yan Solopov	Person(s) Contacted	Mike Forte, Superintendent, eBART/OAC System

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC Audit Schedules 2016-2018.

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Internal Safety Audits

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

1. A three-year internal audit schedule was developed and submitted to the CPUC.
2. All 23-system safety program elements were evaluated within the past three years.
3. CPUC was notified 30 days in advance of the scheduled audit via a letter and or an email and draft checklist(s) were submitted for review
4. The audit included the use of field verification methods to verify the condition of infrastructure and rules compliance activities.
5. The audit adequately addresses interdepartmental and interagency communication issues and whether or not OAC has a process in place for addressing and overcoming non-responsiveness of other department's non-

implementation of audit recommendations.

6. How expertise for auditing specific functions is evaluated to ensure the quality of the internal audit.
7. Audits have been properly documented and include references for documents and activities reviewed criteria for evaluation, and notes to support findings and recommendations.
8. The Audit Report is accompanied by a letter from BART Safety stating OAC's compliance status with its SSPP and/or corrective actions for elements determined not to be in compliance.
9. Corrective actions to address findings from the audit were scheduled, implemented, and tracked.

RESULTS/COMMENTS

Activities:

1) BART completed and submitted to the CPUC their Internal Safety Audits (ISA) 2015 through 2018.
2) Due to the system difference of BART OAC and BART such as no track. There are only 21 elements in their ISA.
3) CPUC is regularly invited to BART OAC ISA.
4) BART OAC ISA includes both field verification and documentation review.
5) Due to the relatively small size of BART OAC there are no interdepartmental difficulties. There are only 38 employees with Doppelmayr and BART on site.
6) The BART superintendent OAC conducted the audit who has been responsible for ISA since the project's inception 17 years ago. BART OAC has only been in operation for four years.
7) BART OAC ISA is thoroughly documented.
8) The BART OAC audit is sent with a letter from BART safety to the CPUC.
9) All corrective actions found by the ISA and the associated Mitigation Measures are tracked through closure.

Comments:

None.

Findings:

None.

Recommendations: None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	13-A	SUBJECT	RULES COMPLIANCE
Date of Review	OCTOBER 23, 2019 8:00a – 8:45a	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Mike Rose Richard Fernandez	Person(s) Contacted	Tony Onisko EBART Safety & Training Manager Michael Forte Superintendent OAC Orville Riley Operations and Maintenance Manager Dean Hurst General Manager David Murphy COO EBART/OAC

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC's APM System Contractor (DCC)s Rule Book
4. OAC's APM System Contractor (DCC)s Maintenance Manual, Operations Manual and SOPs

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Rules Compliance

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

1. Verify OAC's APM contractor performs formal observations of controllers as specified in the SSPP.
2. Verify OAC'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. Verify if OAC SSRC 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 OAC SSRC, managed through the hazard management process.
6. 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 OAC rules.

RESULTS/COMMENTS

Activities:

1. Per the SSPP, Management periodically observes or tests employees in their duties to ensure they are following the prescribed safety rules and procedures. This is done twice yearly for Central Control Operations and Roadway Worker Protection. CPUC Staff reviewed the documented observations starting from January 1st, 2019, Prior to this, OAC was conducting observations of Controllers that lasted for a period of one week.
2. CPUC Staff reviewed OAC Records of formal and unannounced observations of maintenance personnel between January 1st and October 23, 2019. Per the SSPP, OAC is only required to conduct one formal observation yearly of all staff carrying out safety relevant work. CPUC Staff was informed by Operation and Maintenance Manager that all employees receive two observations annually.
3. CPUC Staff was informed by OAC that all observations are unannounced.

OAC selects employees on Monday mornings in order to plan the observations for that week.

4. OAC reported to CPUC Staff that they have been accident free over the last three years.
5. OAC informed CPUC Staff that the performance of rules checks, assessments and testing is discussed at the Weekly Operations Meeting. The minutes from the Weekly Operations Meeting is documented and forwarded to the CPUC Utilities Engineer. When a hazard is identified, it is processed through the Hazard Management Analysis process. All hazards and near misses are presented at the monthly Safety and Security Review Committee (SSRC) Meetings. CPUC Staff reviewed the minutes from the SSRC Meetings and verified that the Hazard Analysis Process is being utilized.
6. CPUC Staff interviewed Controller and Maintenance employees over a two-day period. CPUC found no evidence of PED usage inside the Central Control Room. The employees were familiar with the rules and processes of the OAC System and all required equipment was in good working order. CPUC Staff found the facilities to be clean and well maintained.

Comments:

None

Findings:

None

Recommendations:

None

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR

BART OAKLAND AIRPORT CONNECTOR

Checklist No.	13-B	SUBJECT	RULES COMPLIANCE OPERATION SAFETY COMPLIANCE PROGRAM INSPECTION – CPUC OPERATING INSPECTOR
Date of Review	OCTOBER 23, 2019 8:30a – 9:00a	Department(s)	Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Mike Rose Richard Fernandez	Person(s) Contacted	

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC's APM System Contractor (DCC)s Rule Book
4. OAC's APM System Contractor (DCC)s Access Control Plan
5. OAC's APM Central Control Operating & Maintenance Manual and SOPs

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

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

Interview OAC'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 if staff are following their Rule Book.
   b. Interview at least two workers to evaluate their knowledge and understanding of OAC's APM contractor Rules and Procedures for Guideway Access.
2. System Operators
   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, DCC Rule Book and Bulletins.
   c. DCC System Operators are knowledgeable in dealing and coordinating with others during incidents, accidents, and emergency response situations.

RESULTS/COMMENTS

Activities:

1. CPUC Staff Met with OAC Maintenance Workers and discussed their job duties and rules knowledge. OAC Maintenance Workers showed CPUC Staff the current project for the Bogie rehab which is the trucks of the AMP's. OAC maintenance workers discussed the details of the rehab, the parts that were being upgraded and time frame for completion. the workers were very knowledgeable and pointed out each component on the Bogie to CPUC Staff. CPUC Staff was given a tour of the maintenance area including the rope transfer area on the outside of the shop and the intricacies of how the transfer occurs. Most OAC employees have been cross trained in both Operations and Maintenance which helps them diagnose problems that arise with knowledge from both areas whether in Maintenance or Operations.

2. CPUC Staff visited OAC Central Control Room (CCR) and spoke with three different Controllers over two days. CPUC Staff was shown all aspects of the CCR and Controller day to day routine. OAC Controllers showed CPUC Staff how the APM's are brought into the maintenance bays and returned to revenue service. CPUC Staff was also shown the OAC camera system. The OAC camera system is utilized with SCADA to show intrusion alarms on the APM's and the facility doors. Lastly CPUC Staff reviewed the OAC CCR Rule Book and TMV Operator Logs.

Comments:

CPUC Staff found the backup rule book in OAC CCR was a previous version and OAC Management corrected the issue and updated the rule book at that time. The OAC Rule Book Utilized by the Controllers at the desk was current and up to date.

Findings:

CPUC Staff found TMV Operator Logs missing "Time Removed" and "OP Initials" on 3/29/2019, 5/08/2019, 7/31/2019, and 10/06/2019. These logs are to show who and time entry and exit of the trackway including time and what type of lock out for the occurrence. "OP Initials", are the initials of the CCR Controller who verifies the workers have entered with permission and have cleared the trackway.

Recommendations:

Ensure TMV Operator Logs are properly filled out and all employees are safe, in the clear and accounted for with appropriate time and initials.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	13-C	**SUBJECT**	HOURS OF SERVICE: OPERATORS AND MAINTENANCE, AND TRACK
Date of Review	OCTOBER 22, 2019 11:00a – 12:00p	Department(s)	OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Richard Fernandez Michael Rose	Person(s) Contacted	Tony Onisko EBART Safety & Training Manager Tammy Henry Office Manager Orville Riley Operations and Maintenance Manager

REFERENCE CRITERIA

1. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
2. OAC's APM Time Cards

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Hours of Service: Safety Sensitive Employees

1. Randomly select three employees and review the selected employees' "time on duty" records prepared during a three-month period within the past 12 months and determine if:
   a. The employee was in compliance with the requirement that employees in safety-sensitive positions did not remain on duty for more than 12 consecutive hours in any 16-hour period and;
   b. The initial on duty status for each of these employees only began after

eight consecutive hours off duty.

RESULTS/COMMENTS

Activities:

1. CPUC Staff reviewed Hours of Service Records from dates of January 1, 2019 thru March 31, 2019. The employees randomly selected for the review were Employee #2924, #10759 and #10823.
   - While reviewing the Hours of Service Records CPUC Staff found all three employees in compliance with safety-sensitive position requirements and did not work more than 12 consecutive hours in any 16-hour period.
   - All shifts worked for the three employees reviewed were given the required 8 consecutive hours off duty between work shifts.

Comments:

CPUC Staff found the Hours of Service Records well maintained and documented.

Findings:

None

Recommendations:

None

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	13-D	SUBJECT	CONTRACTOR SAFETY PROGRAM
Date of Review	OCTOBER 22, 2019 2 - 3 pm	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Michael Rose Richard Fernandez	Person(s) Contacted	Tony Onisko EBART Safety & Training Manager Tammy Henry Office Manager Michael Forte Superintendent OAC Orville Riley Operations and Maintenance Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC's APM System Contractor (DCC)s Access Control Plan

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Contractor Safety Program

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

1. OAC/DCC's procedures and practices clearly identify, for the contractors and OAC managers, that OAC is in charge and that its contractors and their employees must comply with all established safety rules and procedures and;
2. OAC/DCC 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. OAC/DCC's monitoring and enforcement activities are properly recorded, distributed, and filed.

RESULTS/COMMENTS

Activities:

1. DCC Safety Policy requires a signature for every contractor employee who is to perform work on OAC property. The DCC Safety Policy ensures contractors follow all APM Safety Rules and includes a zero-tolerance disciplinary action for contractors who violate any safety rules.
2. OAC does not have a policy for regular unscheduled and unannounced compliance checks nor schedule periodic audits and inspections for contractors.

   Per CPUC General Order 164-E Section 3.2 (p): A description of the training and certification program for employees and contractors, including:
   - i. Categories of safety-related work requiring training and certification and the required retraining and recertification period for each category;
   - ii. A description of the training/retraining and certification/recertification program for employees and contractors in safety-related positions.
   - iii. Process used to maintain and access employee and contractor training records; and
   - iv. A process used to assess compliance with training and certification requirements.

Comments:

OAC has a watchman assigned to each contractor, who is required to report any unsafe condition ensuring DCC Safety Policy is followed.

Findings:

OAC SSPP does not include CPUC General Order 164-E Section 3.2 (p) Sub-sections i-iv which outlines contractor inspections, audits, training and certification program.

Recommendations:

OAC shall ensure CPUC General Order 164-E Section 3.2 requirements are implemented into the next revision of the OAC SSPP.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIR CONNECTOR

Checklist No.	13-E	Element	Rules Compliance: Operating Rules and Maintenance Procedures Manual and Operations Bulletin Revisions
Date of Audit	October 23, 2019 8:45a – 10:15a	Department(s)	Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC)
Auditors/ Inspectors	Richard Fernandez Mike Rose	Persons Contacted	Tony Onisko EBART Safety & Training Manager Michael Forte Superintendent OAC Orville Riley Operations and Maintenance Manager Dean Hurst General Manager David Murphy COO EBART/OAC

REFERENCE CRITERIA

1. CPUC General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Rules Compliance:

Operating Rules and Maintenance Procedures Manual and Operations Bulletin Revisions

Interview BART OAC representative responsible for operations rules and procedures, maintenance procedures, and review necessary documentation to determine whether:

1. The Transportation Standard Operating Procedures, Wayside Maintenance Procedures and all active Operating Bulletins are reviewed, revised systematically and distributed to the relevant personnel.

2. All Operating Bulletins were approved by the Operations Superintendent with concurrence of affected departments if applicable and issued in a timely manner.
3. An employee record of all Operating Bulletins issued and received.
4. Active Operating Bulletins are posted in specified locations, and inactive bulletins are removed in a timely manner.
5. CPUC Staff received all new operating rules and bulletins during the past 12 months, and issuance was tracked.
6. Conduct interviews with BART Safety Department representatives to discuss their role in ensuring that safety concerns are addressed in BART's rules compliance program.
7. Does the Safety Department representative receive reports from the BART's operations and maintenance departments regarding the performance of rules checks, assessments, and testing?
8. Are hazards identified from the rules compliance process and reported to BART Safety Department and managed through the hazard management process?

FINDINGS AND RECOMMENDATIONS

Activities:

1. CPUC Staff reviewed the procedure for writing a bulletin or procedure to be issued and discovered that OAC has not issued a bulletin over the past 3 years.
2. OAC has not issued any bulletins, to which there is no paper trail ensuring the procedure is followed. With any rule changes OAC has rewritten and retrained all employees. CPUC Staff was shown attendance rosters signing sheets where training modules for General Safety changes were made.
3. See #2, above.
4. See #2, above.
5. See #2, above.
6. CPUC Staff interviewed OAC Safety and found that every rule infraction and hazard identified is discussed in the SSRC Safety and Security Review Committee. The CPUC is welcome to attend the meeting and the meeting minutes are sent to CPUC.
7. CPUC Staff was shown monthly SSRC Meetings and OAC Safety was

present. OAC also discussed how OAC Safety is included in rules violations and the hazard management process.

8. See #7, above.

Comments:

OAC Does have the required procedures for bulletins document creation.

Findings:

None

Recommendations:

None

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	14-A	Subject	FACILITIES AND EQUIPMENT INSPECTIONS
Date of Review	OCTOBER 23, 2019	Department(s)	OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Shane Roberson Eric Madero Sal Herrera	Person(s) Contacted	Dean Hurst Michael Forte Tony Onisko David Murphy

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019, Section 14.
3. OAC's APM System Contractor (DCC)s Monthly / Weekly Facility Inspections
4. OAC's APM System Contractor (DCC)s Maintenance Management Information System MMIS
5. OAC Safety and Security Review Committee Tracker
6. Maintenance & Operation Manuals and SOPs

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 for the following:
    a. Emergency Exits
    b. Fire Extinguishers

c. Fire Management Systems

d. Fire Hazards

e. Building and Facility Security

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:

CPUC interviewed OAC Staff and reviewed PM records 1M01, 1M02, 1W06, and 1M09

Comments:

None.

Findings:

1. CPUC noted for PM records 1M01 Fire Management Systems, OAC conducted one monthly inspection 27 days outside of its normally scheduled routine in the last year.

   CPUC noted for PM records 1M02 Fire Extinguisher, OAC conducted the three monthly inspections 10, 14, and 11 days out of its normally scheduled routine in the last year. DCC SOP IM01 & 1M02

Recommendations:

1. OAC should conduct PM inspections as scheduled. DCC SOP IM01 & 1M02

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	14-B	Element	Facilities and Equipment Inspections
Date of Audit	October 23, 2019 11:00a – 12:00p	Department(s)	Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC)
Auditors/ Inspectors	James Matus	Persons Contacted	Scott Niedzielski, Maintenance Supervisor

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019, Section 14.
3. OAC's APM System Contractor (DCC)s Monthly / Weekly Facility Inspections
4. OAC's APM System Contractor (DCC)s Maintenance Management Information System MMIS
5. OAC Safety and Security Review Committee Tracker
6. Maintenance & Operation Manuals and SOPs

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Facilities and Equipment Inspections: Measurement and Testing Instrumentation

Interview responsible BART OAC representatives, review appropriate records, and inspect no fewer than eight measuring or testing instruments to determine whether:

1. The selected gauges, micrometers, calipers, torque wrenches, multi-meters, etc. are properly inventoried, stored, distributed for use, calibrated at prescribed intervals, and marked, tagged, or otherwise identified to show current calibration status.

2. The next scheduled testing/calibration due date is shown on each measuring or testing instrument.

FINDINGS AND RECOMMENDATIONS

Activities:

CPUC Staff inspected OAC's tools that need annual calibration. The tools selected were random from the master tool binder. CPUC Staff verified that the tools being inspected had proper identification tags. The company providing calibration service is Technical Services Group. Tools selected had tags but an observation was made to the legibility of some tags. CPUC Staff verified that each tool selected had a current copy of the certificate of calibration on file. CPUC Staff observed missing certification of calibration on one tool selected.

Comments:

All tags on tools that are worn need to be replaced.

Findings:

1. Missing documentation for certificate of calibration in master tool list and binder. Tool #414600087.

Recommendations:

1. OAC should implement a program to where they have a designated employee overseeing the tool calibration program. All copies of calibration must be on file in a master binder for reference.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR

BART OAKLAND AIRPORT CONNECTOR

Checklist No.	14-C	Element	Facilities and Equipment Inspections: Bridges and Aerial Structures
Date of Audit	October 24, 2019 4:00p – 5:00p	**Department(s)**	Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC)
Auditors/ Inspectors	Sal Herrera Shane Roberson Eric Madero	**Persons Contacted**	Michael Forte, Superintendent, eBART/OAC System

REFERENCE CRITERIA

1. General Order 164-E
2. General Order 143-B
3. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019.
4. OAC Safety and Security Committee Tracker
5. APM Contractors Monthly / Weekly / Site Safety Walk Inspections
6. APM Contractors Maintenance Management Information System MAXIMO
7. APM Contractors COMPASS Work Orders
8. APM Contractors Maintenance Manual, Operations Manual and SOPs

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Facilities and Equipment Inspections: Bridges and Aerial Structures

Interview appropriate representatives, perform field observation of appropriate personnel performing inspections and review appropriate records to determine whether:

1. Structures inspections were performed in accordance with reference criteria.
2. Inspections were properly documented and noted, and discrepancies

were corrected in a timely manner.

3. Potential hazards found during inspections were tracked until resolution.
4. The SSRC is aware of all safety hazards identified from Facilities and Equipment Inspection.

Activities:

CPUC staff interviewed appropriate representatives, performed field observation of appropriate personnel performing inspections and reviewed appropriate records.

1. Inspections were performed in accordance with the established procedures. OAC personnel are complying and following proper intervals for all inspections.

2. OAC Staff are identifying concerns and anomalies, noting them on the records, and correcting in a timely manner. The system is only 4 years old and no significant issues have been identified.

3. See #2, above

4. Results of the inspection are reviewed in SSRC.

Comments:
None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	15 - A	Subject	Maintenance Audits and Inspections
Date of Review	October 23, 2019 8:00a – 10:00a	Departments	OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	James Matus	Persons Contacted	Scott Niedzielski, Manager Maintenance

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019.
3. OAC's APM System Contractor (DCC)s Maintenance Manual, Operations Manual and SOPs
4. OAC's APM System Contractor (DCC)s Maintenance Management Information System MMIS

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Maintenance Audits and Inspections/Vehicles -CPUC Inspector

Perform visual inspections and review records as appropriate to determine whether or not:

1. APM vehicles have been maintained as required
2. All preventive and corrective maintenance are being performed at the required frequency interval
3. Noted defects were corrected in a timely manner.

RESULTS/COMMENTS

Activities:

CPUC Staff reviewed preventative maintenance inspection records for the past three years.

1. The review of records was to determine that the required frequencies are being met for P.M. intervals. OAC tracks inspections through paper documentation and then inputs the P.M.'s into the Maintenance Information System.
2. Other than the missing records identified below, preventive maintenance is occurring at the established intervals.
3. Items needing repair during P.M. interval inspections are documented and followed up with a repair work order. CPUC Staff also reviewed documentation on any current overhaul programs for the system.

Additionally, CPUC Staff performed visual inspections of cars to determine if the cars are being properly maintained.

Comments:

OAC needs to organize all maintenance records in a permanent filing system to keep records in good condition and easy access.

Findings:

Missing maintenance documentation for quarterly inspections for the year 2018.

Missing HVAC maintenance inspections for the year 2017.

Recommendations:

OAC needs to keep records on file of all required maintenance inspections and to properly document required maintenance practices.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	15 – B	Subject	Maintenance Audits and Inspections – Central Control Equipment -
Date of Review	October 24, 2019 10:00a – 12:00p	Department(s)	OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Shane Roberson Eric Madero Sal Herrera	Person(s) Contacted	David Murphy – BART Chief Operating Officer of BART OAC/eBART Systems Dean Hurst – DCC General Manager Mike Forte – BART Superintendent eBART/OAC Anthony Onisko – eBART Safety and Training Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC's APM System Contractor (DCC)s Maintenance Management Information System MMIS
4. OAC's APM System Contractor (DCC)s Maintenance Manual, Operations Manual and SOPs

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Maintenance Audits and Inspections – Central Control Equipment

Perform visual inspections and review records as appropriate to determine whether or not:

1. APM central control equipment has been maintained as required.
2. All preventive and corrective maintenance are being performed at the required inspection frequency interval.
3. Noted defects were corrected in a timely manner.

RESULTS/COMMENTS

Activities:

CPUC reviewed PM records 1W06, 1M16, 1M06 and did a visual inspection or central control equipment.

1. Maintenance records and the visual inspection of central control equipment indicate the equipment is being maintained appropriately.

2. Inspections are occurring as required by the established procedures.

3. Corrective actions are being performed in a timely manner.

Comments:

None.

Findings:

None

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	15-C	Subject	Communications System Maintenance
Date of Review	October 24, 2019 1:00p – 3:00p	Department(s)	OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Shane Roberson Eric Madero Sal Herrera	Person(s) Contacted	Mike Forte – BART Superintendent eBART/OAC Anthony Onisko – eBART Safety and Training Manager David Murphy – Chief Operating Officer of BART/eBART Dean Hurst – DCC General Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC's APM System Contractor (DCC)s Maintenance Management Information System MMIS
4. OAC's APM System Contractor (DCC)s Maintenance Manual, Operations Manual and SOPs

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Communications System Maintenance

Perform visual inspections and review records as appropriate to determine whether

or not:

1. APM communications system has been maintained as required.
2. All preventive and corrective maintenance inspections are being performed at the required frequency interval
3. Noted defects were corrected in a timely manner.

RESULTS/COMMENTS

Activities:

CPUC reviewed PM records 1M16 and did a visual inspection on communications equipment.

1. Maintenance records and the visual inspection of communications equipment indicate the equipment is being maintained appropriately.

2. Inspections are occurring as required by the established procedures.

3. Corrective actions were conducted in a timely manner.

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	15-D	Subject	Data Transmission System Maintenance
Date of Review	October 24, 2019 3:00p – 4:00p	Department(s)	OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Shane Roberson Eric Madero Sal Herrera	Person(s) Contacted	Mike Forte – BART Superintendent eBART/OAC Anthony Onisko – eBART Safety and Training Manager David Murphy – Chief Operating Officer of BART/eBART Dean Hurst – DCC General Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC's APM System Contractor (DCC)s Maintenance Management Information System MMIS
4. OAC's APM System Contractor (DCC)s Maintenance Manual, Operations Manual and SOPs

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Data Transmission System Maintenance

Perform visual inspections and review records as appropriate to determine whether or not:

1. APM data transmission system has been maintained as required.
2. All preventive and corrective maintenance practices are being performed at the required inspection frequency interval.
3. Noted defects were corrected in a timely manner.

RESULTS/COMMENTS

Activities:

CPUC reviewed PM records 1M16 and did a visual inspection of data transmission equipment.

1. Maintenance records and the visual inspection of data transmission equipment indicate the equipment is being maintained appropriately.

2. Inspections are occurring as required by the established procedures.

3. Corrective actions were conducted in a timely manner.

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	16	Subject	Training and Certification Program for Employees and Contractors
Date of Review	October 23, 2019 12:00p – 2:00p	Department(s)	Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Shane Roberson Eric Madero Sal Herrera	Person(s) Contacted	Mike Forte – BART Superintendent eBART/OAC Anthony Onisko – eBART Safety and Training Manager David Murphy – Chief Operating Officer of BART/eBART Dean Hurst – DCC General Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC's APM System Contractor (DCC)s Training Documentation
4. Cal-OSHA Safety Orders
5. OAC's APM System Contractor (DCC)s Tool Box Meetings

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Training and Certification Program for Employees and Contractors

Interview OAC and OAC's APM System Contractor (DCC) representative(s) in

charge of System Operators, Maintenance, and signal maintenance employees Certification Programs. Review appropriate records to determine whether or not:

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

RESULTS/COMMENTS

Activities:

CPUC interviewed OAC Staff and reviewed training records for over ten percent of the employees.

1. CPUC conducted interviews of OAC personnel in charge of System Operators, Maintenance, and signal maintenance employees Certification Programs. All Employees have the proper initial and recertification training needed to perform work duties safely.
2. CPUC reviewed training records for over 10 % of the employees. Training is being performed adequately, refreshers and remedial training are performed, as necessary.

Comments:

CPUC found OAC is extremely thorough in its training program and takes safety of its employees, guest, and customers with the highest of regards. As a proactive measure, OAC is currently switching all training tracking records to an Integrated Management System (IMS).

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	17	SUBJECT	CONFIGURATION MANAGEMENT AND CONTROL
Date of Review	OCTOBER 22, 2019 2:00p – 3:00p	Department(s)	BAY AREA RAPID TRANSIT(OAE) Leadership, Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Rupa Shitole Jamie Lau	Person(s) Contacted	Orville Riley, Operations and Maintenance Manager Dean Hurst, General Manager Michael Forte, Superintendent, eBART/OAC System Tony Onisko, eBART Safety and Training Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Configuration Management

1. Randomly select two recent changes pertaining to the APM system at OAC 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 recent proposed modification/change to the system and verify that:
   a. A safety review/analysis of the proposed change was conducted and found to be acceptable to the District and the Manufacturer.
   b. The change is tracked via redlines of as-built drawings or updated design drawings/documents.
   c. The change was tested/inspected prior to being placed into service.
   d. O&M Manuals were updated to reflect the design change.
   e. Operating procedures, preventative maintenance, and corrective procedures specific to the change have been updated.
   f. Formal notification of changes was made to Operator personnel, the District, the manufacturer, and others as appropriate.

RESULTS/COMMENTS

Activities:

Staff interviewed BART OAC representatives related to Configuration Management and Control and determined the following:

1. When any change is proposed the request goes to BART and the Manufacturer for any changes within the system. The contract has specific language for changes on the existing system. The BART OAC shared examples of the recent two (2) changes. Staff reviewed two recent configuration modification projects, "Suppression of Automatic Switch-Over" and "TMV Stop at Red Light." Staff verified both projects contain as-built drawings and as-built specifications. Both projects have change request and test reports documented. BART OAC letters supporting the change were reviewed by Staff.
2. Staff reviewed the same two recent projects and verified that:
   a. A hazard analysis of the proposed change was conducted and found to be acceptable to the District and the Manufacturer.
   b. The change is tracked via redlines of as-built drawings for the Suppression of Automatic Switch-Over. There is no redlines for as-built drawings for the TMV Stop at Red Light project, as it was a software change.
   c. The change was tested prior to being placed into service. The test reports by Doppelmayr were shared with BART OAC personal as required.
   d. O&M Manuals relevant sections were to be updated to reflect the design change. However, no sections in the O&M Manual are related to the change, so no change was made to the O&M Manual.
   e. No operating procedures, preventive maintenance and corrective

procedures specific to the change have been updated.

f. Manufacturer was notified of the changes by signing off the test reports. Staff reviewed letters from Superintendent from BART verifying review changes deemed acceptable.

Comments:

None

Findings:

None

Recommendations:

None

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	18	SUBJECT	LOCAL, STATE, AND FEDERAL REQUIREMENTS AND EMPLOYEE SAFETY PROGRAM
Date of Review	OCTOBER 23, 2019 1400 – 1500	Department(s)	OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Yan Solopov Patrick Donnelly Steve Espinal	Person(s) Contacted	Mike Forte – BART Superintendent eBART/OAC Systems Tony Onisko - Safety Manger, eBART/OAC Orville Riley – DCC Operations and Maintenance Manager Ignacio Sesma – DCC Operations Service Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. Cal-OSHA Safety Orders
4. ANSI B-77 Tramway Standards
5. OAC Operations and Maintenance Manual

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. The contractor operates the OAC system in compliance with local, state (GO 164, 172, ,175), federal and the manufactures safety requirements.
2. The contractor has implemented an employee safety program and training plan that ensures the safe and secure operation of the OAC system.
3. A comprehensive inspection and corrective action program that ensures all requirements are satisfied.

RESULTS/COMMENTS

Activities:

Staff interviewed OAC representatives and reviewed the following records in relation to OAC's Employee Safety Program:

1. OAC's Training Matrix for employees.
2. OAC's Operations and Maintenance Manual.
3. OAC's coursework / curriculum training package.
4. Safety training records and completion dates for two OAC employees selected at random from a list of attendees at a safety meeting:

Precioso "Jun" Querubin – System Operator:

- Near Miss Program – 1/4/2018
- Lock-Out Tag Out – 1/4/2018
- Safety Devices – 6/11/2018
- Roadway Worker Protector – 5/1/2018
- Guideway Access Control – 3/17/2018
- PDS – Generator – 7/25/2018
- PDS – Power Rail – 7/25/2018
- Elevator / Escalator – 6/26/2018
- Fire Management – 6/21/2018
- S.O.P. – CCO – 6/21/2018
- Emergency Procedures – 1/10/2018
- Comm Officer – 6/26/2018
- Operating Subsystem – 6/21/2018
- Pope Position Detection – 7/6/2018
- Mode Change – 6/26/2018
- Bypassing SCADA – 7/6/2018
- Failure Management – 7/10/2018

James Maturnin - Maintenance tech:

- Near Miss - 7/3/19
- Safety Devices - 10/10/18
- Fall Protection - 12/19/16
- Worker Protection - 6/25/19
- Roadway Worker Protection - 8/19/18
- Ladder safety 6/30/19
- Chemical Safety - 6/10/18
- System Security - 7/31/18
- PPE Policy Assessment - 7/3/19
- Personal Electronic Device - 8/26/18
- Defensive Driving - 1/3/15
- TMV Driver Certification - 4/26/18

Staff took note of the following during the interviews and records review:

1. The contractor, DCC, operates the OAC system in compliance with the local, state, and federal requirements as described in the OAC SSPP, dated January 14, 2019, and the manufacturer's safety requirements as described in the OAC Operation and Maintenance Manual, dated October 3, 2019. The manual is available to all staff on their internal website.
2. DCC has thus far successfully implemented an employee safety program and training plan that ensures the safe and secure operation of the OAC system. The structure of the required training has changed since the last triennial audit, but the content remains largely the same. Training is now divided into three categories: Introduction, General Safety, and Organizational Overview. General Safety is the most important section, including training about rules regarding protective equipment, roadway worker protection, personal electronic devices, and other pertinent safety matters. Safety sensitive staff may only begin working once they complete the General Safety section of OAC's training.

   DCC tracks training via a Training Matrix, which staff reviewed. DCC also utilizes a Refresher Training Matrix, which ensures that staff are given refresher training at least once per two years.

   All staff are required to attend two monthly meetings related to safety – the Monthly Staff Meeting and All-Hands Meeting. The Monthly Staff Meeting focuses exclusively on safety issues, such as emergency procedures and internal safety. The All-Hands Meeting focuses on any generally relevant issues but may also address safety issues. Separate meetings are held for both the day and night shift.
3. DCC's maintenance technicians regularly perform Weekly Safety Audits, which are visual inspections of OAC's fixed facilities, with the goal of preventative

maintenance. Maintenance technicians utilize a check-sheet to ensure that all audits are uniform and inspect each required item. Minor issues are addressed on the spot. More serious ones require creating a work order, which is then entered into OAC's database by the maintenance manager. Staff were shown a copy of a check-sheet used for Weekly Safety Audits by maintenance technicians.

Comments:

None

Findings:

None

Recommendations:

None

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	19	SUBJECT	HAZARDOUS MATERIALS PROGRAMS
Date of Review	OCTOBER 23, 2019 1600 – 1700	Department(s)	OAC's APM System Contractor (DCC), OAE Environmental
Reviewers/ Inspectors	Patrick Donnelly Yan Solopov Steve Espinal	Person(s) Contacted	Mike Forte – BART Superintendent eBART/OAC Systems Tony Onisko, Safety Manger, eBART/OAC Orville Riley – DCC Operations and Maintenance Manager Ignacio Sesma – DCC Operations Service Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC's Hazard Communications Program and the Blood borne Pathogen CBT Program.
4. OAC's APM System Contractor (DCC)s Hazardous Communication Program

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Hazardous Materials Programs

1. Select at random two DCC 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 Safety Data Sheets (SDS) are available to all personnel who handle hazardous materials.

RESULTS/COMMENTS

Activities:

Staff interviewed OAC representatives and reviewed the following records in relation to OAC's Hazardous Materials Program:

A. Relevant training records for the following two OAC employees selected at random from a list of employee names:
    a. Precioso "Jun" Querubin – System Operator:
    Received SDS training on 6/11/2018 and Chemical Safety training 1/10/2018.
    b. James Maturnin - Maintenance tech:
    Received SDS training on 10/10/18 and Chemical Safety training on 6/10/18.
B. DCC Chemical Safety and Storage Manual.
C. DCC SDS Manual.
D. A blank OAC Discharge Notification Form.

All OAC employees are required to receive training on safety training topics including Chemical Safety, Storage and SDS as listed in OAC Employee Training and Certification Plan in order to be safety certified to work at OAC.

OAC representatives showed staff the most recent version of the PowerPoint presentations for OAC's Chemical Safety, Storage Manual and SDS Manual. The Chemical Safety and Storage training and SDS training are provided to employees by means of going over a PowerPoint presentation with them and giving them written tests on these subjects, requiring an 80% to pass. Staff determined that the training adequately addressed the areas of reporting requirements, product release or spill, and the response of cleanup of spill incidents, which are covered in the Chemical Safety and Storage training.

1. Based on staff's review of the documents listed above, staff verified that the two OAC employees that staff randomly selected have received specific training for reporting requirements, product release or spill, and the response and cleanup of spill incidents.

Because OAC is a customer of Safety Clean, a company/vendor chosen by OAC that picks up and disposes of OAC's hazardous wastes and recyclable material, OAC gets 24-hour spill response from Clean Harbors, which is the parent company of Safety Clean, when OAC's chemical containment become filled.

2. OAC has not experienced any hazardous spills requiring reporting during the past year. As such, no hazardous materials discharge/spill reports exist. In the event of a hazardous spill, the OAC employee(s) on the site would notify the shift lead, who in turn will notify the OAC Central Control. Then, Central Control would call Safety Clean or Clean Harbors to address the hazardous spill incident. OAC will also fill out the Discharge Notification Form in the event of a hazardous spill.

3. All of OAC's SDS's are available for review at all times to all OAC employees in hard copy form. OAC has collected hard copies of all of their SDS's in one big binder. Each binder contains a table of contents to show the substances alphabetically and all the SDS's are organized alphabetically in the binder with sections dividing letters to make it easier for employees to look through. One of these binders was presented to staff for visual verification of their existence at the OAC facilities. OAC has three stations including the Airport station, Coliseum station, and Doolittle station, which is where the maintenance facilities are located. A binder containing all of OAC's SDS's is available in the SDS binder holder on the wall near where the substances are kept at each of the three stations.

   OAC has used the same chemicals and hasn't added new chemicals since the beginning of their operation. The existing SDS binder is completely up to date as of the date of this checklist review.

   If OAC has a new substance that comes on site, the DCC System Safety Coordinator would get the approved SDS for the substance, add that to a weekly toolbox meeting where he will review the new SDS with all OAC employees to make sure everyone is aware of the new substance onsite and understands its SDS, and then he would add the SDS to every SDS binder for everyone to have access to. OAC doesn't approve new chemicals for use at the facilities at the weekly toolbox meetings. They will certify new chemicals before they would even procure them for use at the facilities.

Comments:

None

Findings:

None

Recommendations:

None

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	20	SUBJECT	DRUG AND ALCOHOL PROGRAM
Date of Review	OCTOBER 23, 2019	Department(s)	OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Colleen Sullivan 9:00a – 10:00a	Person(s) Contacted	Tammy Henry, Office Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC's APM System Contractor (DCC)s Corporate Drug and Alcohol Policy

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 DCC 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.

4. Determine if OAC has ever undergone a federal or state audit of its drug and alcohol program?
   a. What were the recommendations if any?
   b. Have corrective actions to recommendations been addressed?

5. Confirm that this information was accurately reported to FTA through BART's annual submission to the Drug and Alcohol Management Information System (DAMIS)

RESULTS/COMMENTS

Activities:

1. OAC did not encounter any refusals to test within the last year. Only one positive result was reported in September 2019 from a random test. Employee random test date was September 19, 2019. The result came in on September 24, 2019. The employee was immediately removed from duty. Referral to Substance Abuse Professional (SAP) and notification of 30-day suspension per policy provided both verbally and in writing on September 24, 2019. The 30 days will expire on October 24, 2019. The OAC is awaiting the SAP report and the follow up instructions.
2. OAC has a policy in place for managing over-the counter drugs. The policy is outlined in DCC's Corporate Drug and Alcohol Policy, OAC-ORG-2030, Chapter 4, Page 9. It is the responsibility of the employee, when selecting over-the-counter medication, to read all warning labels before selecting it for use while working. Medications whose labels indicate they may affect mental function, motor skills, or judgement should not be selected. The employee has the responsibility to refrain from using any over-the-counter medication that causes performance altering side effects, whether or not the label warns of them. For the safety of the employee and the employees around the employee, the employee must notify a Human Resources (HR) Representative regarding any medication he may be on prior to beginning work. Subsequently, the HR Representative sends the employee to DCC's clinic for evaluation. This evaluation determines if over-the-counter medication the employee is taking makes him fit or unfit for the employees particular job duties.

3. Only one employee has received a positive test as a result of monthly random selection.
    a. OAC has not yet received SAP report for the employee currently serving a 30-day suspension as described in #1.
    b. October 24, 2019 is the prescribed date for which the SAP needs to submit written report to OAC on behalf of the employee, to date no report has been received.
    c. Waiting for report from SAP for follow-up testing frequency and criteria. To date no report has been received.
    d. OAC has no repeat offenders.
4. OAC has not been audited by any Federal or State agencies other than the CPUC. OAC files reports quarterly as required by BART to Compliance Oversight Solutions Ideal (COSI), LLC. First Quarter 2019 Report submitted and accepted by COSI. No recommendations or deficiencies were reported as a result of review by COSI. No actions was required by COSI. Second Quarter 2019 report has been submitted to COSI for review. OAC waiting for response to submitted report. Third Quarter Report due by October 30, 2019.
5. This information was accurately reported to FTA through BART's annual submission to the Drug and Alcohol Management Information System (DAMIS).

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	21	Subject	Procurement Process
Date of Review	October 25, 2019 12:00 – 1:00pm	Department(s)	OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Jamie Lau Rupa Shitole	Person(s) Contacted	Orville Riley – Operation and Maintenance Manager (Doppelmayr) Dean Hurst – General Manager (Doppelmayr) Michael Forte – Superintendent Tony Onisko – Safety Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC's APM System Contractor (DCC)s Procurement Policy

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Procurement Process

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

1. Verify DCC 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 OAC.

4. Have unexpected delays or process complications delayed the procurement of goods, or services available for usage or resulted in vendor provided services being acquired and implemented in a timely manner.

RESULTS/COMMENTS

Activities:

Staff interviewed OAC representatives related to their Procurement Process and determined the following:

1. Procurement policy is in place for DCC to follow. Safety critical parts are defined in the projects. Original parts are ordered from the Original Equipment Manufacturer (OEM) itself. The purchase order is placed and then the delivery materials are inspected upon receipt. The Maintenance Management Information System (MMIS) tracks the receivable materials. Staff sampled a purchased items record (Invoice CD2020000021) dated in May 2019. The record shows the item was purchased through Original Equipment Manufacturer (OEM) with quotations. Safety issues and concerns are being addressed during the inspection upon arrival process, where OAC staff inspect the received items to check for any defects or concerns before signing off. Staff verified the subject item was signed off.
2. The inspection and sign off process precludes introduction of defective or deficient equipment into the APM system environment.
3. The measurements are conducted during inspections and placed on hold if they are out of specific. The inspection and sign off process precludes introduction of defective or deficient equipment into the APM system environment.
4. OAC staff indicated there was not an incident where procurement encountered unexpected delays.

Comments:

None.

Findings:

None.

Recommendations:

None.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	22	Element	General Order 172 – Personal Electronic Device Prohibitions/In-cab Cameras
Date of Review	October 25, 2019 2:30p – 3:30p	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC)
Auditors/ Inspectors	Richard Fernandez Michael Rose	Persons Contacted	Tony Onisko EBART Safety & Training Manager Tammy Henry Office Manager Michael Forte Superintendent OAC Orville Riley Operations and Maintenance Manager

REFERENCE CRITERIA

1. General Order 172
2. General Order 164-E
3. OAC System Safety Program Pan (SSPP) Revision 2 dated January 14, 2019
4. APM Contractors PED Policy

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

General Order (GO) - 172 Personal Electronic Device (PED) Prohibitions/In-cab Cameras Compliance

Interview appropriate representatives and review documentation to determine the following:

1. Determine if the APM Contractor has developed and implemented a PED zero-tolerance policy and program usage, as required by General Order 172, Section 5.

2. Is the zero-tolerance policy being enforced?
3. What is the failure rate of in-cab cameras and how many cameras failed in the last three years? Verify the recording retention complies with General Order 172.
4. Verify the APM Contractor has conducted random evaluations for PED usage as required by General Order 172, Sections 4.3.e, 4.5, and 6.2.
5. Does the PED procedure comply with General Order 172?
6. Verify if APM Contractor personnel comply with PED rules (Field Activity - See Checklist 13-B).

FINDINGS AND RECOMMENDATIONS

Activities:

1. CPUC Staff interviewed OAC Personnel while reviewing the OAC Personal Electronic Device Policy, Version 0. CPUC Staff found the OAC PED Policy to be complete and contained all CPUC General Order 172 requirements.
2. There have been no PED Violations recorded within the past 3 years
3. Question #3 does not apply to this OAC per CPUC General Order 172 4.1 (b) Vehicles without on-board operators.
4. CPUC Staff reviewed the System Operator Rules and Procedure Compliance (DCCCA1-OAC) forms. The SSPP requires each employee to be tested twice per year. Each employee is also retrained every 2 years on the OAC PED Policy and required to sign the attendance roster to ensure each employee has received their retraining.
5. CPUC Staff reviewed OAC, Personal Electronic Device Policy, Version 0 and ensured it included all aspects of CPUC General Order 172 requirements.
6. Field Activity - See Checklist 13-B.

Comments:

None.

Findings:

Although the PED Policy of BART OAC contains both the zero tolerance policy and the emergency contact procedures, Staff found the OAC SSPP violates CPUC General

Order 172 Section 5.2, requiring RTAs shall include or reference their zero-tolerance policy and program in their SSPP and rail operations rules.
The OAC SSPP is also missing, CPUC General Order 172 Section 7.
Section 7- REQUIREMENTS FOR EMERGENCY CONTACT PROCEDURES. RTAs shall implement procedures by which employees addressed in this General Order can be contacted in the event of a personal or family emergency. These procedures shall include, at minimum, the routing of that contact through a designated person or division within the RTA. These procedures shall be communicated to all affected employees in writing, and copies shall be available to Commission staff and be included or referenced in an RTA's SSPP when it is revised.

Recommendations:
Ensure the next revision to the OAC SSPP includes CPUC General Order 172 Sections 5.2 and 7.

2019 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR BART OAKLAND AIRPORT CONNECTOR

Checklist No.	23	Subject	General Order 175-A – Rules and Regulations Governing Roadway Worker Protection Provided by Rail Transit Agencies and Fixed Guideway Systems
Date of Review	October 25, 2019 2:00p – 3:00p	Department(s)	BAY AREA RAPID TRANSIT(OAC) Leadership, Safety and Security Review Committee (SSRC), OAC's APM System Contractor (DCC)
Reviewers/ Inspectors	Shane Roberson Eric Madero Sal Herrera	Person(s) Contacted	Mike Forte – BART Superintendent eBART/OAC Systems Anthony Onisko – eBART Safety and Training Manager David Murphy – BART Chief Operating Officer of BART OAC/eBART Systems Dean Hurst – DCC General Manager

REFERENCE CRITERIA

1. General Order 164-E
2. OAC System Safety Program Plan (SSPP) Revision 2 dated January 14, 2019
3. OAC's APM System Contractor (DCC)s Training Documentation
4. Cal-OSHA Safety Orders
5. OAC's APM System Contractor (DCC)s Tool Box Meetings

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Training and Certification Program for Employees and Contractors

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

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

RESULTS/COMMENTS

Activities:

CPUC interviewed OAC staff, reviewed training records for 10+ percent of employees, sat in on a training class, and witnessed a job briefing.

1. CPUC interviewed OAC employees and representative(s) in charge of System Operators, Maintenance, and signal maintenance employees Certification Programs regarding roadway worker safety procedures. Procedures require the initial training and annual refresher training.
2. Records show all personnel have completed training and recertification in a timely manner.

Comments:

None.

Findings:

None.

Recommendations:

None.