

2014

**TRIENNIAL SAFETY REVIEW OF
SACRAMENTO REGIONAL TRANSIT DISTRICT**

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



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Elizaveta Malashenko, Director
Safety and Enforcement Division

2014 TRIENNIAL SAFETY REVIEW
SACRAMENTO REGIONAL TRANSIT DISTRICT

ACKNOWLEDGEMENT

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

Daren Gilbert, Rail Transit Safety Branch
Program Manager
Stephen Artus, Rail Transit Safety Branch
Program and Project Supervisor
Michael Borer, Senior Transportation Operations
Supervisor
Steven Espinal, Senior Utilities Engineer
Raed Dwairi, CPUC Representative to SRTD,
Project Coordinator, Utilities Engineer
Rupa Shitole, Utilities Engineer

Ronnie Cremeans, Signals Inspector
John Madriaga, Track Inspector
Robert Hansen, Utilities Engineer
Jimmy Xia, Utilities Engineer
Daniel Kwok, Utilities Engineer
Yan Solopov, Regulatory Analyst
Michael Warren, Utilities Engineer
Debbie Dziadzio, Operations Inspector
Kevin McDonald, Track Inspector
Jason Dixon, Mechanical Inspector
Joey Bigornia, Utilities Engineer

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1. EXECUTIVE SUMMARY

The California Public Utilities Commission's (Commission) Safety and Enforcement Division (SED), Rail Transit Safety Branch staff (Staff), conducted an on-site system safety program review of the Sacramento Regional Transit District (SRTD) on May 27, 2014 through June 6, 2014.

The on-site review was preceded by an opening conference with SRTD personnel on May 27, 2014. The review focused on verifying the effective implementation of the System Safety Program Plan (SSPP) and compliance with Commission General Orders.

Staff held a post-review conference with SRTD personnel on July 8, 2014. Staff provided SRTD personnel with a synopsis of the preliminary review findings and preliminary recommendations for corrective actions.

The review results indicate that SRTD has a comprehensive system safety program, and has effectively implemented its SSPP; however, staff noted exceptions during the review. These exceptions are described in the Findings and Recommendations sections of each checklist. Based upon the 34 checklists used to guide the review, staff identified 19 recommendations for corrective actions. These are distributed among the Light Rail Operations, Wayside Maintenance, Safety, and Engineering departments.

The Introduction and Background Sections of this report are presented in Sections 2 and 3 respectively. The Background Section contains a description of SRTD's rail transit system and a status of the corrective actions resulting from the 2011 on-site safety review recommendations. Section 4 describes the review procedure. The review findings and recommendations are listed in Section 5. The 2014 SRTD Triennial Safety Review Acronyms List is found in Appendix A, Checklist Index in Appendix B, Recommendations List in Appendix C and Review Checklists in Appendix D.

2. INTRODUCTION

The Commission's General Order (GO) 164-D *Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems*, and the Federal Transit Administration's (FTA) Rule, Title 49 Code of Federal Regulations (CFR) Part 659, *Rail Fixed Guideway Systems: State Safety Oversight*, require the designated State Safety Oversight Agencies to perform a review of each rail transit agency's system safety program at a minimum of once every three years. The purpose of the triennial review is to verify compliance and evaluate the effectiveness of each rail transit agency's System Safety Program Plan (SSPP) and their implementation of it, and to assess the level of compliance with GO 164-D and other Commission safety requirements. Staff conducted the most recent previous on-site safety review of SRTD in May 2011.

Staff advised the SRTD's General Manager/Chief Executive Officer (GM/CEO) by a letter dated April 25, 2014, of the scheduling of the Commission's safety review on May 27, 2014. The letter included the 34 checklists that served as the basis for the review.

Commission staff (Staff) conducted the 2014 SRTD on-site safety review from May 27 through June 6, 2014. Staff conducted an opening conference on May 27, 2014, with SRTD's GM/CEO and the Executive Management Team. At the conclusion of each review activity, CPUC staff provided SRTD personnel a verbal summary of the preliminary findings and discussed preliminary recommendations for corrective actions.

On July 8, 2014, staff conducted a post-review exit meeting with SRTD's GM/CEO and the department managers. Staff provided the attendees a synopsis of the non-compliant findings from the 34 checklists and discussed the need for corrective actions where applicable.

3. BACKGROUND

The Sacramento Regional Transit District (SRTD) is governed by an 11-member Board of Directors comprised of members of the Sacramento, Rancho Cordova, Citrus Heights, Elk Grove, and Folsom City Councils as well as the Sacramento County Board of Supervisors.

SRTD Rail System Description

SRTD currently operates approximately 39 miles of tracks, covering a 418 square-mile service area with 50 stations. Light rail trains currently operate from 3:50 AM to 12:47 AM daily with service every 15 minutes during the day and every 30 minutes in the evening, on weekends and holidays. Weekday ridership averages 44,000 passengers.

SRTD began operations in 1973 with the acquisition of the Sacramento Transit Authority. Throughout the following decade, SRTD continued to expand its bus service while city, county, and state government officials worked together to develop a light rail system. In 1987, the 18.3 mile light rail system opened linking the northeast (Interstate 80) and Folsom (Highway 50) corridors with downtown Sacramento. In 1998, SRTD began expanding the light rail system to further meet the transportation needs of the Sacramento area. Since then, a number of light rail expansion projects have been completed, including:

- 1998 – 2.3 mile Mather Field extension and Brighton Bridge double track project;
- 2003 – Bee Bridge double track project;
- 2003 – 6.3 mile South Line Phase I extension;
- 2004 – 2.8 mile extension from Mather to Sunrise;
- 2005 – 2.4 mile extension from Sunrise to Folsom;
- 2006 – 0.55 mile extension to Amtrak;
- 2009 – Watt Avenue Grade Separation;
- 2012 – 1.1 mile Green Line Extension from H/County Center Station to T9 Station/Richards Boulevard.

In late 2005, SRTD changed its light rail system's names from the North Line, Folsom Line and South Line, to the Gold Line and the Blue Line. The Gold Line runs from the Historic Folsom Station in downtown Folsom to the Sacramento Valley Station at the Amtrak Station in downtown Sacramento. The Blue Line runs from the Watt/I-80 Station in the northeast corridor to the Meadowview Station in the south. In 2012, the Green Line was completed serving the Township 9 Station on Richards Boulevard, which is a one mile extension from downtown Sacramento to Richards Boulevard and the 7th and Richards/Township 9 Station. This line includes 2 stations and runs a 30 minute service from the Township 9 Station to the existing 13th Street Station.

The South Sacramento Corridor Phase II is an extension of the Blue Line from the Meadowview Station to the future Cosumnes River College Station, a 4.3 mile extension. At the time of the audit the project was under construction and the extension was opened and placed in service on August 24, 2015.

The Green Line to the Airport project is a future extension extending the system from the Richards Boulevard/Township 9 Station to the Sacramento International Airport.

In 2003, SRTD purchased 21 light rail vehicles from the Santa Clara Valley Transportation Authority. A project is under way to renovate these cars so they may operate on the SRTD light rail system and resemble similar operating conditions of the existing fleet. These cars are expected to be ready for operation during 2016.

Status of the 2011 SRTD Triennial Review Recommendations

Staff performed the previous triennial on-site safety review in May, 2011. From the thirty-four checklists used to guide that review, staff made ten recommendations for corrective actions. The results of the 2011 Triennial Review demonstrated that SRTD was largely in compliance with its SSPP.

CPUC Commission Resolution ST-137 adopted staff's final report and ordered SRTD to develop an appropriate corrective action plan and implementation schedule to respond to the issued recommendations. Resolution ST-137 also ordered SRTD to submit monthly status reports tracking the implementation of these corrective actions through full completion.

SRTD developed and submitted a corrective action plan and an implementation schedule to fulfill each of the ten recommendations. On May 14, 2012, SRTD submitted its final 2011 CPUC Safety Review Monthly Status Report completing its last corrective action in compliance with ST-137.

4. SAFETY REVIEW PROCEDURE

Staff conducted the 2014 safety review in accordance with Rail Transit Safety Section Procedure RTSS-4, *Procedure for Performing Triennial Safety Reviews of Rail Transit Systems*. Staff developed 34 checklists to cover various aspects of system safety responsibilities, based on Commission and FTA requirements, SRTD's SSPP, safety-related SRTD documents, and the Staff's knowledge of SRTD's operations. A list of the 34 checklists is contained in Appendix B, and the completed checklists are included in Appendix D.

Each checklist identified safety-related elements and characteristics that were either inspected or reviewed by staff. The completed checklists include the staff's findings and recommendations corresponding to non-compliant findings with SRTD's SSPP, its procedures, or Commission regulations. The methods used to perform the review included:

- Discussions and interviews with SRTD's 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 rail operations and are known or believed to be important in reducing safety hazards and preventing accidents.

5. FINDINGS AND RECOMMENDATIONS

The triennial on-site safety review demonstrates that SRTD's rail system has a comprehensive SSPP and has been effectively implementing it. Review findings identify areas where changes should be made to adhere to the SSPP. The review results are derived from activities observed, documents reviewed, issues discussed with management, and field inspections. Overall, the review results confirm that SRTD is generally in compliance with its SSPP. The review identified 19 recommendations from the 34 checklists. Following are the findings and recommendations for each checklist:

1. **Executive Management Involvement and Commitment to Safety**

No findings of non-compliance; no recommendations.

2. **System Safety Program Plan: Goals & Objectives**

No findings of non-compliance; no recommendations.

3. **Overview of Senior Management Structure**

No findings of non-compliance; no recommendations.

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

No findings of non-compliance; no recommendations.

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

No findings of non-compliance; no recommendations.

6. **Hazard Management Process**

Findings of non-compliance:

1. Identified hazards are discussed during monthly Hazard Resolution Fire/Life Safety Committee (HRF/LSC). However, some safety data sources identified in the SSPP are not being fully analyzed. No documentation was shown for trend analysis as specified in its SSPP.
2. No documentation was presented to provide evidence that SRTD is consistently performing statistical and trend analysis, evaluating and categorizing hazards by using the Hazard classification for severity and Hazard classification for probability in its SSPP, Sections 6.22 and 6.23 and subsequently not identifying hazards, from the unsafe condition reports it collects and stores in database.

Recommendations:

1. SRTD should follow its current requirements and expand its implementation of its Hazard Management Program to assign a hazard index to all identified hazards and report those reaching the Unacceptable Hazardous Condition thresholds to CPUC as required by SRTD's SSPP, and conduct the data analysis and trending required by the SSPP.

7. **System Modification**

No findings of non-compliance; no recommendations.

8. **Safety & Security Certification**

No findings of non-compliance; no recommendations.

9. **Safety Data Collection & Analysis**

No findings of non-compliance; no recommendations.

10. **Accident/Incident Investigations**

Findings of Non-Compliance:

1. Accident reports were not consistent in including all the elements prescribed by SRTD procedure SA-SOP-00-006 Rail Accident Investigation Procedure.
2. SRTD has routinely in the past (during the audit period) reported accidents without including rail transit vehicles involved or the emergency response organization at the scene.

Recommendations:

1. SRTD should generate accident investigation reports as dictated in SRTD procedure SA-SOP-00-006 Rail Accident Investigation Procedure.
2. SRTD must include information required by all sections of GO 164-D, Section 7.3 when reporting accidents to the point of contact with the CPUC unless particular ones are clearly not applicable.

11. **Emergency Management Program**

No findings of non-compliance; no recommendations.

12. **Internal Safety Audits/Reviews**

No findings of non-compliance; no recommendations.

13-A. **Rules Compliance: Observation & Enforcement**

Findings of Non-Compliance:

1. Records reviewed per year:

- a. 2014 (70 Operators) – 10 records reviewed. Of the 14% reviewed, 80% were non-compliant. Level I performance evaluations were missing.
 - b. 2013 (68 Operators) – 7 records reviewed. 100% compliant.
 - c. 2012 (64 Operators) – 7 records reviewed. Of the 11% reviewed, 29% were non-compliant. Level I performance evaluations were missing.
 - d. 2011 (59 Operators) – 6 records reviewed. 100% compliant.
2. SRTD Maintenance Department does not have a formal observation program to ensure rules compliance, as it does for its Operations Department. Daily, Supervisors will observe, and coach and counsel (formally, informally) regarding unsafe practices and procedures. There is no formal documentation system for these compliance checks and no data that is forwarded to the Safety Department for data and trend analysis, nor are the informal observations otherwise documented in the individual's personnel/training file.

Recommendations:

1. Currently Group Supervisors perform the efficiency tests on SRTD's operators. The Group Supervisors should be refreshed/retrained in the frequency of the various levels of testing to assure the testing is completed in a timely manner and in accordance with established procedures.
2. The Maintenance Department, working with Safety Department, needs to initiate a formal rules compliance/operations evaluation system as per the SSPP, for maintenance individuals, as it does for operations personnel.

13-B. Rules Compliance: Operations Safety Compliance

No findings of non-compliance; no recommendations.

13-C. Rules Compliance: Hours of Service

No findings of non-compliance; no recommendations.

13-D. Rules Compliance: Contractor Safety Program

No findings of non-compliance; no recommendations.

13-E. Rules Compliance: Maintenance Procedures & Operation Bulletins Revisions

Findings of Non-Compliance:

1. CPUC Staff is not on the distribution list for all updated rules, bulletins, and notices.

Recommendations:

1. Include CPUC on distribution list for updates/revisions to operating rules, notices, SOP's as per GO 143 B, Section 13.02.

14-A. Equipment Inspections: Wayside

Findings of Non-Compliance:

1. a) Pettibone Speedswing # 196: Front and rear hi-rail gear had no locking pins to safely secure hi-rail gear when utilized on the rail, or when stored in the up position for street travel. Also, this equipment had no pre-trip inspection sheet. This equipment had a fire extinguisher, but no date stamp tag for re-charging or expiration. SRTD internal inspection policy for this equipment is every 180 days. SRTD records show inspections on December 28, 2012, but then not again until December 2, 2013, and no current 180 day inspection for 2014 (two inspection reports missing for this time period).
- b) Brandt Utility Truck # 181: This equipment had a fire extinguisher, but no date stamp tag for re-charging or expiration. This equipment's left rear backup work light was non-functioning. SRTD internal inspection policy for this equipment is every 90 days. SRTD records show inspections on May 24, 2013, but then not again until November 23, 2013, and then not again until May 6, 2014 (two 90 day inspections missing for this time period).
- c) SRTD Dump Truck # 543: This equipment had a fire extinguisher, but no date stamp tag for re-charging or expiration. SRTD internal inspection policy for this equipment is every 90 days. SRTD records show inspections on August 15, 2013, and then not again until January 3, 2014, a period of 5 months.

Recommendations:

1. SRTD should follow its inspection and maintenance requirements, and address the deficiencies identified below, on its non-revenue and maintenance vehicles.
 - a) Pettibone Speedswing # 196: Install necessary hi-rail gear locking pins, front and rear. Keep a daily pre-trip inspection sheet in the equipment cab. Install date stamp for all fire extinguishers. Follow SRTD's own internal inspection policy of 180 days for this equipment.
 - b) Brandt Utility Truck # 181: Install date stamps for all fire extinguishers. Repair non-functioning left rear backup work light. Follow SRTD's own internal inspection policy of 90 days for this equipment.
 - c) SRTD Dump Truck #543: Install date stamps for all fire extinguishers. Follow SRTD's own internal inspection policy of 90 days for this equipment.

14-B. Facilities & Equipment Inspections: Stations and Emergency Equipment

Findings of Non-Compliance:

1. SRTD does not employ Inspectors to conduct required inspection. SRTD relies on LRV Operator complaints and Station Guards to report defects.
2. SRTD Fails to conduct Quarterly Inspection as required.

3. Repair Orders are incomplete. Documents provided by SRTD failed to show location and repairs performed.
4. Document shows section of fence missing at Substation 6 but could not generate record of repair at time of request.
5. Spreadsheet titled "Sacramento Regional Transit Weekly Station Evaluation" fails to show date of inspection and is currently being used by SRTD Facilities Personnel as means of off-site inspections.
6. SRTD Facility Personnel currently use (2) two forms of tracking for station evaluations that are not consistent. Information is not shared between lists or dated and tracked to completion of repairs.

Recommendations:

1. SRTD should develop a program with the controls necessary to make certain, all required station facilities and emergency equipment inspections are conducted and documented as required.

14-C. Facilities & Equipment Inspections: Bridges & Aerial Structures

Findings of Non-Compliance:

1. No follow-up action was taken in response to the leaning wall at the Sunrise Boulevard Separation Bridge, which was given a Priority 1 status, requiring action within 90 days.
2. Cracked concrete joint on the Overhead Catenary System support posts were not addressed in a timely manner.

Recommendations:

1. SRTD should ensure that defects found during routine and auxiliary inspections are assigned appropriate priority ratings, and that follow-up action is taken accordingly.

14-D. Facilities & Equipment Inspections: GO 95 Right-of-Way Compliance

Findings of Non-Compliance:

1. Some substations lacked fire extinguishers and the substations with fire extinguishers are not routinely inspected.
2. Substation F15 on the Folsom Line emergency lighting is out of service. Substation S3 one set of emergency lighting of the two are out of service.

Recommendations:

1. Inspect all substations and provide properly functioning and inspected fire extinguishers.
2. Repair emergency lighting at substation F15 and S3 emergency lighting. Conduct an inspection of all the emergency lighting throughout all the substations and repair any additional lighting which is out of service.

14-F. Facilities & Equipment Inspections: Measurement & Testing Instrumentation

Findings of Non-Compliance:

1. Documents supplied by SRTD Personnel indicate all 329 pieces of equipment that are used to ensure required daily inspection and repair of LRV's are out of date. Individual items are tagged with identification stickers that show tool ID # and date of calibration. Individual tool inspections on over 10% of items confirmed tools are being used that exceed LR-SOP-01-224 requirements of yearly calibration. SRTD could not indicate when tools will be brought into compliance with SOP requirement. LRV Maintenance staff indicated procurement issues prevent the required calibrations from being performed in a timely manner. Tools that are used for tire measurement and torque confirmation are among tools beyond calibration requirement as of June 4, 2014.

Recommendations:

1. SRTD must prevent the necessity of using delinquent repair and inspection equipment by developing a testing/calibration schedule for such equipment. SRTD must procure the calibration and testing equipment it needs to perform the required inspections or otherwise acquire those services in a timely manner.

15-A. Maintenance Audits & Inspections: Rail Vehicles

Findings of Non-Compliance:

1. Defects noted on several inspected LRV's. See Checklist 15-A for detailed list.
2. CPUC Staff reviewed current "Internal Annual Rail System Safety Audit Report 2013" that was supplied by SRTD System Safety Personnel. This audit is conducted annually to conform to State and Federal requirements. Page 5 & 6 contain recommendations and findings. Page 9 contains Checklist No. 2 which encompasses Maintenance Audits and Inspection Processes. On 04/28/2014 CPUC Staff conducted a Mechanical Inspection of LRV's and SRTD Metro Facility and found fire extinguishers located in Operating Cabs and within Maintenance Areas that were well beyond expiration of service. SRTD Personnel indicated procurement of contract was the reason all LRV's were being used for public revenue service with expired fire extinguishers. SRTD Internal Annual Rail System Safety Audit Report 2013 made no mention of finding in its report, even though the fire extinguishers expire dates were within the following month.

Recommendations:

1. SRTD should address and repair all the items identified in checklist #15-A, and develop the controls necessary to ensure adherence to LRV preventive maintenance requirements, LRV Mileage Based Inspections LR-SOP-06-300.

2. Fire extinguishers throughout the agency's vehicles and facilities must be inspected and serviced in accordance with the testing and inspection protocols and before the expiration date tagged on the unit.

15-B. Maintenance Audits & Inspections: Traction Power System

Findings of Non-Compliance:

1. The Folsom OCS system was only inspected May 30, 2014, for the inbound directions for 2014. The outbound Folsom line OCS has not been inspected in 2014. According to the SRTD tractions maintenance standards the OCS system shall be inspected quarterly.

Recommendations:

1. Conduct OCS on a quarterly basis dictated by SRTD procedures.

15-C. Maintenance Audits & Inspections: Signals

No findings of non-compliance; no recommendations.

15-D. Maintenance Audits & Inspections: Tracks and Turnouts

Findings of Non-Compliance:

1. Switch 225 A has a loose jam nut and insecure connecting rod. Missing cotter pin near # 1 switch rod at switch 215 A.

Recommendations:

1. Tighten and secure jam nut and connecting rod at switch 225 A. Install missing cotter pin near # 1 switch rod at switch 215 A.

15-E. Training & Certification Program: Operators, Controllers, and Supervisors

No findings of non-compliance; no recommendations.

16. Training & Certification Program: Employees and Contractors

Findings of Non-Compliance:

1. Three LRV Technicians received late safety recertification training and five MOW Employees received late safety recertification training
2. SRTD has no written program that ensures that LRV Maintenance personnel are in compliance with established rules and procedures.

Recommendations:

1. SRTD should establish and follow a written schedule for ensuring all safety-sensitive employees receive their Rulebook recertification training as prescribed by GO 143-B, Section 13.03.

2. SRTD should develop a program to monitor LRV Maintenance personnel's compliance with approved procedures per SSPP, Section 5.3.1, and GO 143-B, Section 13.04. (Same as Recommendation # 5, checklist 13-A)

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**

Findings of Non-Compliance:

1. SRTD was not able to provide weekly inspection records related hazardous material storage areas for the Academy Way Facility as per their procedures.

Recommendations:

1. SRTD should follow their own procedures regarding hazardous materials area inspections accordingly or revise them to reflect current practices. Additionally, SRTD should maintain and provide requested documents as per GO 143-B requirements.

20. **Drug and Alcohol Program**

No findings of non-compliance; no recommendations.

21. **Procurement**

Findings of non-compliance:

1. SRTD was not able to provide training records for procurement process staff training as per their procedures
2. CPUC Staff conducted mechanical audits on April 28, 2014, and it was discovered that all LRV's in service have expired fire extinguishers as of 12/2013. SRTD Mechanical Personnel were interviewed and advised CPUC Staff that Procurement Department had yet to complete contract to have extinguishers brought into compliance. SRTD Procurement Personnel interviewed was aware of expired fire extinguishers but could not complete contract in time.
3. During completion of Checklist #14F, it was discovered that SRTD had failed to have all instruments calibrated prior to annual expiration. SRTD Mechanical Personnel stated (June 3, 2014) that SRTD Procurement was responsible for failure to complete contract. SRTD Procurement Personnel was interviewed June 4, 2014, and advised CPUC Staff that they were unaware of calibration compliance failure.

Recommendations:

1. SRTD should follow their own training procedures accordingly or revise them to reflect current training practices.
2. SRTD should reevaluate the communications and feedback loop between its operations and maintenance departments and the Procurement Department to assure that needs are properly communicated and services, materials and equipment necessary are timely obtained.

APPENDICES

- A. Abbreviation and Acronym List

- B. SRTD 2014 Triennial Safety Review Checklist Index

- C. SRTD 2014 Triennial Safety Review Recommendations List

- D. SRTD 2014 Triennial Safety Review Checklists

APPENDIX A

ABBREVIATION and ACRONYM LIST

Abbreviation / Acronym	Description
SRTD	Sacramento Regional Transit District
CAP	Corrective Action Plan
CFR	Code of Federal Regulations
Commission	California Public Utilities Commission
SED	Safety and Enforcement Division
CPUC	California Public Utilities Commission
FTA	Federal Transit Administration
GO	General Order
HOS	Hours of Service
IIPP	Injury and Illness Prevention Program
ISSA	Internal Safety and Security Audit
OCC	Operations Control Center
PHA	Preliminary Hazard Analysis
PM	Preventive Maintenance
RTCB	Rail Transit and Crossing Branch
RTSS	Rail Transit Safety Section
SAP	Substance Abuse Professional
SCP	Safety Certification Plan
SCVR	Safety Certification Verification Report
SSP	System Security Plan
SSPP	System Safety Program Plan
Staff	Safety and Enforcement Division personnel

APPENDIX B

2014 SRTD TRIENNIAL SAFETY REVIEW CHECKLIST INDEX

Checklist No.	Element / Characteristic	Checklist No.	Element / Characteristic
1	Policy Statement and Authority for SSPP: Senior Management Involvement and Commitment to Safety	14-A	Equipment Inspections: Wayside
2	System Safety Program Plan: Goals & Objectives	14-B	Facilities & Equipment Inspections: Stations & Emergency Equipment
3	Overview of Management Structure	14-C	Facilities & Equipment Inspections: Bridges & Aerial Structures
4	System Safety Program Plan: Control & Update Procedure	14-D	Facilities & Equipment Inspections: GO 95 Right-of-Way Compliance
5	System Safety Program Plan: Implementation activities & Responsibilities	14-E	Facilities & Equipment Inspections: Signal System & Vital Relay Maintenance
6	Hazard Management Process	14-F	Facilities & Equipment Inspections: Measurement & Testing Instrumentation
7	System Modification	15-A	Maintenance Audits & Inspections: Rail Vehicles
8	Safety & Security Certification	15-B	Maintenance Audits & Inspections: Traction Power System
9	Safety Data Collection & Analysis	15-C	Maintenance Audits & Inspections: Signals
10	Accident/Incident Investigations	15-D	Maintenance Audits & Inspections: Tracks & Turnouts
11	Emergency Management Program	15-E	Training & Certification Programs: Operators, Controllers, and Supervisors
12	Internal Safety Audits/Reviews	16	Training & Certification Programs: Employees & Contractors
13-A	Rules Compliance: Observation & Enforcement	17	Configuration Management & Control
13-B	Rules Compliance: Operations Safety Compliance	18	Local, State, and Federal Requirements: Employee Safety Program
13-C	Rules Compliance: Operator, Controller, and Maintenance Personnel Hours of Service	19	Hazardous Materials Program
13-D	Rules Compliance: Contractor Safety Program	20	Drug & Alcohol Program
13-E	Rules Compliance: Op. Rules, Maintenance Procedure Manual & Op. Bulletin Revisions	21	Procurement Process

APPENDIX C

2014 SRTD TRIENNIAL SAFETY REVIEW RECOMMENDATIONS LIST

No.	Recommendation	Checklist No.
1	SRTD should follow its current requirements and expand its implementation of its Hazard Management Program to assign a hazard index to all identified hazards and report those reaching the Unacceptable Hazardous Condition thresholds to CPUC as required by SRTD's SSPP, and conduct the data analysis and trending required by the SSPP.	6
2	SRTD must include information required by all sections of GO 164-D, Section 7.3, when reporting accidents to the point of contact with the CPUC, unless particular ones are clearly not applicable.	10
3	Currently Group Supervisors perform the efficiency tests on SRTD's operators. The Group Supervisors should be refreshed/retrained in the frequency of the various levels of testing to assure the testing is completed in a timely manner and in accordance with established procedures.	13-A
4	The Maintenance Department, working with Safety Department, needs to initiate a formal rules compliance/operations evaluation system as per the SSPP, for maintenance individuals, as it does for operations personnel.	13-A And 16
5	Include CPUC on distribution list for updates/revisions to operating rules, notices, SOP's as per GO 143-B, Section 13.02.	13-E

No.	Recommendation	Checklist No.
6	<p>SRTD Should follow its inspection and maintenance requirements, and address the deficiencies identified below, on its non-revenue and maintenance vehicles.</p> <ul style="list-style-type: none"> a) Pettibone Speedswing # 196: Install necessary hi-rail gear locking pins, front and rear. Keep a daily pre-trip inspection sheet in the equipment cab. Install date stamp for all fire extinguishers. Follow SRTD's own internal inspection policy of 180 days for this equipment. b) Brandt Utility Truck # 181: Install date stamps for all fire extinguishers. Repair non-functioning left rear backup work light. Follow SRTD's own internal inspection policy of 90 days for this equipment. c) SRTD Dump Truck #543: Install date stamps for all fire extinguishers. Follow SRTD's own internal inspection policy of 90 days for this equipment. 	14-A
7	<p>SRTD should develop a program with the controls necessary to make certain, all required station facilities and emergency equipment inspections are conducted and documented as required.</p>	14-B
8	<p>SRTD should ensure that defects found during routine and auxiliary inspections are assigned appropriate priority ratings, and that follow-up action is taken accordingly.</p>	14-C
9	<p>Inspect all substations and provide properly functioning and inspected fire extinguishers.</p>	14-D
10	<p>Repair emergency lighting at substation F15 and S3 emergency lighting. Conduct an inspection of all the emergency lighting throughout all the substations and repair any additional lighting which is out of service.</p>	14-D
11	<p>SRTD must prevent the necessity of using delinquent repair and inspection equipment by developing a testing/calibration schedule for such equipment. SRTD must procure the calibration and testing equipment it needs to perform the required inspections or otherwise acquire those services in a timely manner.</p>	14-F

No.	Recommendation	Checklist No.
12	SRTD should address and repair all the specific items identified in checklist #15-A, and develop the controls necessary to ensure adherence to LRV preventive maintenance requirements, LRV Mileage Based Inspections LR-SOP-06-300.	15-A
13	Fire extinguishers throughout the agency's vehicles and facilities must be inspected and serviced in accordance with the testing and inspection protocols and before the expiration date tagged on the unit.	15-A
14	Conduct OCS inspections on a quarterly basis dictated by SRTD procedures.	15-B
15	Tighten and secure jam nut and connecting rod at switch 225 A. Install missing cotter pin near # 1 switch rod at switch 215 A.	15-D
16	SRTD should establish and follow a written schedule for ensuring all safety-sensitive employees receive their Rulebook recertification training as prescribed by GO 143-B, Section 13.03.	16
17	SRTD should follow their own procedures regarding hazardous materials area inspections or revise them to reflect current practices. Additionally, SRTD should maintain and provide requested documents as per GO 143-B requirements.	19
18	SRTD should follow their own training procedures accordingly or revise them to reflect current training practices.	21
19	SRTD Should reevaluate the communications and feedback loop between its operations and maintenance departments and the Procurement Department to assure that needs are properly communicated and services, materials and equipment necessary are timely obtained.	21

APPENDIX D

2014 SRTD TRIENNIAL SAFETY REVIEW CHECKLISTS

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	1	Element	Policy Statement and Authority for System Safety Program Plan: Management Involvement and Commitment to Safety
Date of Audit	May 29, 2014	Department(s)	SRTD Senior Management
Auditors/ Inspectors	Steve Artus Daren Gilbert Mike Borer Raed Dwairi	Persons Contacted	Mike Wiley, General Manager/CEO Mark Lonergan, Chief Operating Officer Mike Mattos, Chief of Facilities & Business Services Rufus Francis, Director of Safety

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Policy Statement and Authority for System Safety Program Plan:

SRTD Senior Management Involvement and Commitment to Safety

Interview SRTD General Manager (GM) and Chief Operating Officer (COO) to discuss:

1. Source, frequency, and depth of safety information provided to the GM, whether safety is included as a regular topic at SRTD executive management meetings, and whether SRTD Safety gives reports at these meetings.
2. Methods and incentives included in the management performance system to facilitate a system safety culture within the organization.
3. Formal meetings held and attended by SRTD Executive Management to discuss safety performance, such as ongoing evaluation of goals and targets.
4. SRTD GM and COO awareness of high priority safety issues related to operations and capital projects.
5. SRTD COO's awareness of the status of all corrective actions, including those initiated by accidents, hazardous conditions, internal safety and security audits, CPUC triennial on-site reviews, and CPUC inspections. The System Safety Department's reporting relationship to SRTD's executive management, and management's participation in safety activities.
6. Which individuals and departments are involved in making safety decisions and to what degree executive management is involved?
7. Scope of senior management involvement, coordination, and communication in developing SSPP revisions.

8. Is safety included as a regular topic at SRTD Board Meetings and whether SRTD Director of Safety provides updates and concerns?
9. Formal meetings that are held and attended by SRTD Executive Leadership to discuss safety performance (such as ongoing evaluation of goals and targets).
10. The SRTD Safety Department's reporting relationship to SRTD GM/CEO, the SRTD's Safety structure, and the participation of the SRTD's Senior Management in this structure.
11. The process for the periodic review of the resources devoted to safety by SRTD GM/CEO and SRTD Executive Management Team.
12. The inclusion of safety responsibilities in job evaluations for managers, supervisors, and employees.
13. Does the GM ever go to Operations, Maintenance, Metro Control and talk to the rank and file to discuss their safety concerns?

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed senior management at SRTD and determined the following:

1. Safety issues can be directly brought to the attention of the GM/CEO who encourages open dialog on safety-related issues.
2. GM/CEO knows immediately about any safety issues or any questions from the media. The GM/CEO is on the incident distribution list and may respond to the scene of accidents.
3. SRTD board is notified when serious accidents occur.
4. GM/CEO receives Hazard Resolution Meeting minutes and conducts monthly meetings with the Executive Management Team. Quarterly meetings are held where anyone can participate as well as monthly online chat meetings (questions can be posted) and past chats are posted online.
5. Trends are brought to the attention of the GM/CEO such as the insulator failure incidents. GM/CEO responded to an insulator failure incident.
6. CAPs are reported to the GM/CEO and discussed on as-needed basis.
7. GM/CEO briefs SRTD board on serious accidents which result in claims.
8. SRTD has an incentive programs such as safe driving awards.

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	2	Element	System Safety Program Plan: Goals and Objectives
Date of Audit	May 29, 2014	Department(s)	SRTD Senior Management
Auditors/ Inspectors	Stephen Artus Daren Gilbert Mike Borer Raed Dwairi	Persons Contacted	Mike Wiley, General Manager/CEO Mark Lonergan, Chief Operating Officer Mike Mattos, Chief of Facilities & Business Services Rufus Francis, Director of Safety

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP), dated January 2014

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

System Safety Program Plan: Goals and Objectives

Interview SRTD Executive Management and review appropriate records to:

1. Determine if the SSPP goals and objectives have been achieved.
2. Obtain examples of how goals are evaluated (metrics and measures) and review documentation used to track SRTD activities to meet the goals and objectives. For example, if SRTD set a goal of reducing incidents by 10%, has this been achieved? How is this metric tracked and reported?
3. Determine how safety performance is reported to the GM/CEO and Chief Operating Officer (COO) or other executive management.
4. Make a determination regarding the adequacy of the safety information provided to the GM. Is the GM receiving sufficient information to ensure SRTD is meeting its safety goals and objectives? Are rule(s) violations and other key safety metrics being tracked and reported to the COO?
5. Determine whether the stated goals and objectives should be revised.
6. Determine whether management responsibilities are adequately identified for the goals and objectives.
7. Review documentation used to measure and track SRTD activity to meet the goals and objectives specified in the SSPP.
8. Review documentation used to report to SRTD GM/CEO or other SRTD Senior Managers regarding the safety performance of the district (i.e., monthly or annual safety reports, quarterly viewgraph presentations, etc.).
9. Make a determination regarding the adequacy of the safety information provided to the

SRTD's Executive Leadership.

- a. Is SRTD's Executive Leadership receiving sufficient information to ensure that SRTD is meeting its safety goals and objectives?
- b. Are rules violations and other key safety measurements being tracked and reported to SRTD's Executive Leadership?

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed senior management at SRTD and determined the following:

1. SSPP goals and objectives are reviewed as part of SSPP review.
2. GM/CEO attends both entrance and exit meetings of Annual Internal Safety Audits
3. Goals and objectives are evaluated as part of conducting internal safety audits and during board meetings, etc.

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	3	Element	Overview of Management Structure
Date of Audit	May 29, 2014	Department(s)	Safety Department
Auditors/ Inspectors	Stephen Artus Daren Gilbert Mike Borer Raed Dwairi	Persons Contacted	Mike Wiley, General Manager/CEO Mark Lonergan, Chief Operating Officer Mike Mattos, Chief of Facilities & Business Services Rufus Francis, Director of Safety

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Overview of Senior Management Structure

Interview SRTD Senior Management and review appropriate records to:

1. Discuss SRTD's process for integrating safety into SRTD operations and maintenance activities.
2. Solicit opinions regarding the effectiveness of the organization and request a few examples of how this organization has worked to resolve identified safety issues.
3. Identify any specific deficiencies in the safety and security program due to limitations in staffing levels and resources. For example, discuss any difficulties in maintaining schedules for the SSPP updates, completing Internal Safety and Security Audits, or performing Accident/Incident Investigations.
4. Review Joint Union/Safety Committee Meetings agendas and minutes from the past twelve months to verify that the meetings were held according to the requirements in the SSPP.
5. Review records to:
 - a. Ensure that the organization chart accurately depicts both the SRTD's organization and the organization of the Safety Department.
Review agendas and minutes from committee meetings led by the Safety Department to verify that they took place and that they followed the requirements specified in appropriate rules or procedures or the SSPP.
 - b. Review agendas and minutes from committee meetings led by the other SRTD departments to verify that they took place and that the Safety Department participated.
 - c. Is there evidence (i.e., meeting minutes, hazard analysis documents) that the Safety Department was consulted and involved?

- d. Is there evidence (i.e., meeting minutes, review of CAP) that the Safety Department contributed to resolution of the issue? Review the Safety Department's resources and personnel to make an assessment regarding the resources devoted to safety and if they are adequate.
 - e. What is the current level of personnel resources devoted to rail transit safety issues, both in the Safety Department and in other SRTD departments?
 - f. If Safety Department resources have been reduced or personnel reorganized, has SRTD conducted a safety resource allocation assessment?
 - g. Does the Safety Department have personnel resources allocated to support interdepartmental coordination on safety issues and concerns?
6. Have SRTD's Safety Department's personnel and resources been cut or increased disproportionately with SRTD's overall budget over the last three (3) years?

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed senior management at SRTD and discussed new employee training/orientation, safety meetings, and other safety programs.

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	4	Element	System Safety Program Plan: Control and Update Procedure
Date of Audit	May 27, 2014	Department(s)	Safety Department
Auditors/ Inspectors	Stephen Artus Daren Gilbert Steve Espinal Mike Borer	Persons Contacted	Rufus Francis, Director of Safety

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP), dated January 2014

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

System Safety Program Plan: Control and Update Procedure

Interview Director of Safety and review appropriate records to:

1. Ensure that Safety understands the requirements and is implementing them.
2. Solicit opinions regarding the effectiveness of the organization and request a few examples of how this organization has worked to resolve identified safety issues.
3. Verify that 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.
4. Review the SSPP to:
 - a. Ensure that it describes the process for an annual SSPP assessment and update.
 - b. Ensure that it describes the process for coordinating with the CPUC, including timeframes for submission, revision and approval.
 - c. Ensure that it contains a distribution and change control process.
5. Review records to:
 - a. Verify that all SSPP revisions have been submitted to the CPUC according to the approved process and timeframes by reviewing past correspondence and records.
 - b. Verify that the annual review process is being implemented according to the approved process specified in the SSPP:
 - c. Review responsibility
 - d. Internal timeframes
 - e. Comprehensiveness
 - f. Sign-offs

FINDINGS AND RECOMMENDATIONS

Activities:

Interviewed the Director of Safety and Senior Safety Specialist with SRTD:

1. SRTD conducts a SSPP orientation with all new employees and safety training.
2. SRTD also conducts a detailed Internal Safety Audit (ISA).
3. SRTD conducts a hazard resolution meeting monthly. CPUC staff is included in the meeting. Regarding new projects such as South Line phase 2 SRTD conducted a Preliminary Hazards Analysis (PHA). Another example includes an intersection of concern at 10th and O Streets. SRTD hired a traffic engineer to improve the design at 10th and O Street to improve the safety. Hazard resolution meetings are conducted the fourth Friday of the month.
4. SRTD reviews their SSPP annually. Any changes to the SSPP must be approved by Chief Operating Officer, General Manager and legal department.
5. SRTD safety staff review the SSPP annually. SRTD safety sends letters annually by February 15 of each year for approval.
6. Staff reviewed the request for SSPP revisions for 2012 and 2013. Updates to SRTD SSPP in 2012 included General Order 172 inclusion and staffing/service changes. Updates to SSPP in 2013 were due to internal audits and FTA suggestions to the CPUC regarding SRTD. Both letters were provided to the CPUC prior to the February 15 due date. Both letters provided details of the rationale of the changes as well as the actual changes.

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	5	Element	System Safety Program Plan: Implementation Activities and Responsibilities
Date of Audit	May 27, 2014	Department(s)	Safety Department
Auditors/ Inspectors	Stephen Artus Daren Gilbert Steve Espinal Mike Borer	Persons Contacted	Rufus Francis, Director of Safety

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

System Safety Program Plan: Implementation Activities and Responsibilities

Interview SRTD appropriate personnel and review appropriate records to:

1. Verify each manager and department is charged with responsibility and accountability for SSPP implementation, enforcement, and effectiveness.
2. Identify any challenges each manager or department has in performing tasks relating to the SSPP or general safety.
3. Verify management accountability for the performance of safety-related activities, and, if serious or potentially serious deficiencies are found, expand the review to include additional and/or related activities.
4. Review the SSPP to:
 - a. Ensure that the SSPP accurately lists the safety-related activities necessary for SRTD Safety Department to effectively implement the safety program in a matrix or narrative format.
 - b. Ensure that each activity is assigned to a specific position with management accountability.
 - c. Ensure that the SSPP accurately lists the safety-related activities to be performed by other SRTD departments to effectively implement the safety program in a matrix or narrative format.
 - d. Ensure that each activity for the other SRTD departments is assigned to a specific position with management accountability.
5. Select, at random, 3 activities performed by the safety function and 3 activities performed by other SRTD departments, and collect and review documents to:

- a. Verify that the safety-related activities are being performed.
- b. Verify that identified positions are carrying out the safety-related tasks assigned in the SSPP.
- c. Verify management accountability for the performance of the safety related activities.

FINDINGS AND RECOMMENDATIONS

Activities:

1. New employees receive an orientation of the SSPP. New employees will also receive training including hearing protection, hazardous materials, wayside and the rule book.
2. Challenges include new rules including General Order 172 and 175. Other challenges include rules changes related to CAL/OSHA requirements. Also the implementation poses challenges as well. Also rules changes related to union contracts can be problematic.
3. Each month employees receive toolbox training which is documented. The General Manager also receives toolbox training.
4. SSPP details the safety department responsibilities. SSPP detailed safety responsibilities of the Rail Transportation Section, Metro Control, Light Rail Vehicle Maintenance, Light Rail Wayside Maintenance, Signal System and Traction Power. The Director of Light Rail is responsible for verifying rail operations meet all safety requirements.
5. Reviewed documentation regarding the Internal Safety Audit (ISA) of 2011 including:
 - a. The new line construction including the Green Line construction.
 - b. The committee meeting minutes of the International Brotherhood of Electrical Workers (IBEW) and SRTD.
 - c. The corrective action plan associated with the ISA. Reviewed a safety related documents related to the Green Line project.
 - d. The areas of concern of the IBEW and corrective actions taken to resolve the matter.

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	6	Element	Hazard Management Process
Date of Audit	June 3, 2014	Department(s)	Safety Department
Auditors/ Inspectors	Claudia Lam Steve Espinal Raed Dwairi Daniel Kwok Michael Warren	Persons Contacted	Rufus Francis, Director of Safety Rob Hoslett, Senior Safety Specialist

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP), dated January 2014
3. Rail Accident Investigation Procedures
4. Hazard Resolution Fire/Life Safety Committee Meetings

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Hazard Management Process

Interview SRTD representatives and review appropriate records to determine whether:

1. SRTD is identifying hazards through the sources described in the SSPP.
Sources include, but are not limited to:
 - a. Reports and complaints from passengers, field, or management personnel;
 - b. Data mining of agency control logs and maintenance records
 - c. Monitoring special orders and speed restrictions
 - d. Shift Pass Down records;
 - e. Review of OCC logs for unusual occurrences reports;
 - f. SRTD's OSHA 300A;
 - g. Annual ISAs;
 - h. Weekly and monthly facilities inspections;
 - i. Monthly and quarterly safety statistics reports
 - j. OR&P compliance;
 - k. Results from CPUC Triennial Reviews;
 - l. Results from accident investigations and trend analysis.
 - m. Reports from Operators and Supervisors
 - n. Results from efficiency/proficiency testing and other rules compliance activities
2. The Safety Department maintains a mechanism to capture and track identified hazards through analysis and resolution.

3. SRTD has defined minimum thresholds for the notification and reporting of hazards to CPUC.
4. SRTD has a specified process for reporting hazard resolution activities to CPUC as required by General Order 164-D, Sections 6e and 6f.
5. Identified hazards are being evaluated according to the methods established in the SSPP.
6. 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.
7. The Safety Department follows up on outstanding CAPs to mitigate or resolve hazards.
8. Safety Department has followed the resolution process, monitored other departments, and ensured identified hazards were reported. Request examples.
9. Review records to:
 - a. Ensure that the CPUC is being notified of identified hazards as specified in the SSPP.
 - b. Verify that the appropriate entities are performing hazard evaluation/categorization activities (Safety Committee, Director of Safety, etc.)
 - c. Verify that the Safety Department follows-up

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed Director of Safety, and Senior Safety Specialist, regarding Hazard Management Process and reviewed relevant program documentation. Staff determined the following in summary:

1. SRTD collects safety data from a variety of sources such as claims database, hazard identification forms (Safe 1, Safe 2), accident reports, OCC logs, customer service inputs, audits, etc. Safety data includes information such as SRTD accident, employee performance failures, equipment failure, and procedural deficiencies.
2. SRTD has a process in use to capture and track identified hazards through analysis and resolution. SRTD has defined minimum thresholds for the notification and reporting of hazards to the CPUC and a letter dated February 27, 2014 was sent to CPUC management to clarify “reported hazard” in SRTD’s SSPP as “unacceptable hazard.
3. According to SRTD safety manager, Corrective Action Plans (CAPs) are developed to address identified hazards and all departments belong to HRF/LSC meet monthly to collect, transfer the data, and assign responsibility for the CAPs.
4. The Safety Department follows up on the CAPs and monthly HRF/LSC also discusses and tracks the status of CAPs.

Findings:

1. Identified hazards are discussed during monthly Hazard Resolution Fire/Life Safety Committee (HRF/LSC). However, some safety data sources identified in the SSPP are not being fully analyzed. No documentation was shown for trend analysis as specified in its

SSPP.

2. No documentation was presented to provide evidence that SRTD is consistently performing statistical and trend analysis, evaluating and categorizing hazards by using the Hazard classification for severity and Hazard classification for probability in its SSPP, Sections 6.22 and 6.23 and subsequently not identifying hazards, from the unsafe condition reports it collects and stores in database.

Comments:

1. SRTD is not using TransitSafe software for rail safety data as stated in its SSPP. Safety department tracks accident data using Excel and it is upgrading it to MS Access.
2. SRTD should update its SSPP if the reports and database are no longer being used. For example, TransitSafe software, Daily activity reports, Unusual Occurrence Logs, Mining of maintenance.

Recommendations:

1. SRTD should follow its current requirements and expand its implementation of its Hazard Management Program to assign a hazard index to all identified hazards and report those reaching the Unacceptable Hazardous Condition thresholds to CPUC as required by SRTD's SSPP, and conduct the data analysis and trending required by the SSPP.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	7	Element	System Modification
Date of Audit	May 28, 2014	Department(s)	Engineering Department Safety Department
Auditors/ Inspectors	Joey Bigornia Raed Dwairi	Persons Contacted	Darryl Abansado, Director of Civil & Track Eric Oparko, Quality Assurance Administrator Rufus Francis, Director of Safety

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

System Modification

Interview SRTD representatives and review appropriate records to determine whether:

1. The SSPP and referenced or supporting procedures ensure a process exists for addressing safety issues and concerns in system modifications.
2. The Safety Department is involved in assessing/ensuring safety concerns are addressed in system modifications by identifying their specific activities in the process such as documentation participation in testing, inspections and observations performed at work sites.
3. Select three system modification projects implemented at random,
 - a. Verify that this process was consistent with SSPP requirements and included an evaluation of potential hazards the modification could pose to the system.
 - b. Verify that these hazards were addressed and included an evaluation of potential hazards arising from the proposed modification. (i.e., emails, meeting minutes, sign-offs, inspection checklists, etc.).
 - c. Verify that any changes made as a result of a system modification are now reflected in final as-built drawings for the facility and/or specifications for the vehicle and/or equipment.
 - d. Verify that SRTD's configuration management process has been followed to address system modification, and no unauthorized modifications were implemented.

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed the SRTD Engineering Department and SRTD Safety Department

representatives responsible for assessing System Modifications and determined the following:

1. SRTD's internal and external (e.g. Outside) system modification projects follow the requirements of SRTD's Configuration Management Plan (CMP) PC-SOP-96-001. The CMP identifies all requirements such as reviews & approvals necessary before a system modification is finalized and change is authorized.
2. The Safety Department is required to sign a project form acknowledging review and/or issuance of comments for system modification. Safety Department reviews integrated test plans and is involved in all aspects of a project system modification.
3. SRTD Engineering Department is involved in system modification review. Delegates from each department are also made aware of projects at the monthly Change Review Committee (CRC) Meetings. SRTD file documentation of system modifications consists of the following: CRC meeting minutes, incident reports, and on-site investigations by SRTD's Engineering, Safety, and Operations. The on-site investigation sometimes involves external representatives from the California Public Utilities Commission (CPUC) or City of Sacramento. A Configuration Change Request Form (CCRF) cover page accompanies each project and CCRF Section Nos. 11-16 require signatures approvals from the Initiator, Supervisor, Department Head, Appropriate Director/Engineering, Director of Safety, QA Administrator, and Final Review and Approval to either Accept or Reject the Proposed Change.
4. Staff reviewed the following projects.
 - a. Ahern Crossing:
SRTD noticed an increase of Light Rail Vehicle (LRV) incidents for the past 5 years at this location. SRT initiated a Project CRC Form 014-08 on December 28, 2007. An on-site diagnostic review with CPUC and SRT representatives occurred on March 17, 2008, SRTD proposed a plan, and a CPUC General Order 88 Rules for Altering Public Highway-Rail Crossings was submitted on February 12, 2010. CPUC staff responded on March 18, 2010, to SRTD's submittal, and a Notice to Proceed (NTP) was issued on October 26, 2010. Project final close-out was in 2011 and As-Built Drawings were updated in June 2012. SRTD's files contained all necessary correspondences and approval with applicable agencies.
 - b. 34th and Stockton Street Crossing:
SRTD noticed several incidents at this location and research began on who had the responsibility for street & grade crossing modifications. SRTD found the 1985 City of Sacramento's Memorandum of Understanding stated "any impacts due to crossing (e.g. alterations) were SRTD's responsibility". SRTD Engineering mitigated safety issues by proposing to add in a left turn pocket from R Street onto 34th street. SRTD entered into agreement for street modifications and then transferred responsibility to City of Sacramento for construction. An onsite field diagnostic was initiated in late 2009, was presented to the CRC on May 2, 2010, SRTD submitted a GO 88 application to CPUC on August 30, 2013, and SRTD's GO 88 was approved by CPUC by letter dated August 23, 2013. SRTD is currently awaiting the Notice to Proceed and Project is tracked

via current process. SRTD's files contained all necessary correspondences and approval with applicable agencies.

c. Hazard Analysis of 9th and O Street and 10th & O Street:

CPUC initiated contact with Safety Department with grade crossing safety concerns in April 2013. Funds have been requested, and were approved for the Hazards Analysis study to begin. The Project is not at the Configuration Management Level at this time however, the project is also tracked in the Hazard Resolution monthly meeting minutes. SRTD's files contained all necessary correspondences and approval with applicable agencies.

All SRTD projects follow the CMP process for review and approval (See Checklist #17).

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	8	Element	Safety and Security Certification
Date of Audit	June 5, 2014	Department(s)	Safety Department
Auditors/ Inspectors	Jimmy Xia Michael Warren Daniel Kwok Yan Solopov	Persons Contacted	Rufus Francis, Director of Safety Rob Hoslett, Senior Safety Specialist John Valsecchi, SSCP 2 Project Manager

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP), dated January 2014
3. SA-SOP-06-009, dated November 1, 2006

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Safety and Security Certification

Interview the SRTD representative(s) in charge of the Safety Certification Program and review the records of all major projects to determine whether:

1. A formal SCP has been submitted by SRTD and approved by the Commission.
2. Each SCP was consistent with General Order 164-D, the SSPP, and applicable reference documents.
3. There has been effective communication with CPUC staff throughout the life of current and planned projects, including the Preliminary Engineering Design Phase.
4. All design and construction changes were properly coordinated and addressed in the Safety Certification process.
5. Was a PHA performed?
6. All identified hazards have been eliminated or controlled as required under the SCPs.
7. Is the hazard management process identified in the safety certification program plan consistent with the SSPP?
8. All submittal elements for Safety Certified projects during the past three years were identified for the Safety Certification Verification Report and submitted to CPUC in a timely manner, according to the requirements of General Order 164-D.
9. Review documentation to determine if New Starts and major projects undertaken by SRTD:
 - a. Address safety certification management, including organizational authority and responsibilities.
 - b. Identify the process used to verify and document conformance with safety and security requirements during design, construction, testing, and operational readiness.

- c. Are overseen and approved by FTA and its Project Management Oversight Consultants (PMOCs).
 - d. Is the certification program being administered by the transit agency or a contractor?
 - e. Has a certification committee been created?
 - f. Has a certifiable items list been created?
 - g. Have all designs been reviewed, stamped and sealed by a licensed Professional Engineer?
 - h. Are design changes and Non-Conformance Reports (NCRs) analyzed for safety impacts? Have these been thoroughly documented?
 - i. Have training programs been updated as necessary and have all employees been trained?
 - j. Has a testing program been developed and administered?
 - k. Is the GM/CEO required to formally sign and certify the project complete and safe for operations?
10. Conduct interviews with safety department personnel to determine how the department has been involved in the certification of SRTD New Starts and major projects.
11. Conduct interviews with SRTD project staff involved in New Starts and major projects to discuss how safety concerns were addressed and the level of interaction with the Safety Department.

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed the SRTD representatives in charge of the Safety Certification Program and reviewed the following safety certification documents related to SRTD's two major projects:

1. Green Line to the River District Project, also known as the Green Line Project
 - a. SRTD Green Line to the River District Safety and Security Certification Plan, dated June 8, 2010
 - b. CPUC Resolution ST-119, issued on December 17, 2010, to approve the SRTD Green Line to the River District Safety and Security Certification Plan
 - c. Green Line MOS-1 Extension Safety Certification Exceptions List
 - d. Green Line to the River District Preliminary Hazard Analysis Report, dated September 2010
 - e. SRTD's letter, dated June 6, 2012, requesting that the CPUC approve the Safety Certification Verification Report (SCVR) and revenue service for the Green Line Project
 - f. SCVR for the Green Line Project, dated June 15, 2012
 - g. CPUC's certification letter to SRTD approving the SCVR and revenue service for the project, dated June 14, 2012
 - h. Safety and Security Conformance Certificates for the project
 - i. Certificates of Safety Compliance for the project
 - j. Green Line Project Integrated Test Report dated April 25, 2014
2. South Sacramento Corridor Project Phase 2 (SSCP 2)
 - a. SRTD South Sacramento Corridor Project Phase 2 Safety and Security Certification Plan,

dated September 2012

- b. CPUC Resolution ST-136 issued on March 23, 2012, for approving SRTD South Sacramento Corridor Project Phase 2 Safety and Security Certification Plan
- c. SRTD South Sacramento Corridor Project Phase 2 Safety and Security Certification Verification Report for Aerial Structures
- d. Safety Certification Certificates for design and construction for aerial structures
- e. Preliminary Hazard Analysis for South Sacramento Corridor Project Phase 2, dated January 23, 2013
- f. Safety and Security Management Plan for SRTD SSCP 2, dated August 9, 2013

No exceptions were noted in the documents listed above.

Staff noted the following from the interviews and records review:

1. The SC Plans for SRTD's Green Line Project and South Sacramento Corridor Project Phase 2 (SSCP 2) were submitted by SRTD to CPUC. Both SC Plans have been formally approved by Commission Resolutions corresponding to each respective plan.
2. Each SC Plan was consistent with General Order 164-D, the SSPP, and applicable reference documents.
3. SRTD maintains effective communications with CPUC staff throughout the lives of current and planned projects.
4. The Green Line MOS-1 Extension Safety Certification Exceptions List shows that seven out of the nine exceptions for the Green Line project have been closed; two out of the nine exceptions remain open and are in the process to be resolved according to SRTD's engineering process that deals with design and construction changes.
5. For SSCP 2, there are no changes to design criteria at this moment. If changes occur as the project progresses, they will be properly coordinated and addressed in the safety certification process.
6. A PHA was performed for both projects reviewed.
7. After the safety certification process is completed for a project, if there are any hazards left to be resolved, they will be addressed in the safety certification process and tracked in the monthly Hazard Resolution Fire Life Safety Committee (HRFLSC) meetings. All hazards identified for the Green Line project except for two exceptions (shown on the Green Line MOS-1 Extension Safety Certification Exceptions List) have been resolved as required under the SC Plan for the project. The two outstanding exceptions are tracked in the monthly HRFLSC meetings until completion.
8. Currently, there are no hazards identified for the SSCP 2 because the project and the safety certification process are not yet complete.
9. The hazard management processes identified in the safety certification program plans for both projects are consistent with the SSPP.
10. SRTD submitted elements for the Safety Certification Verification Report (SCVR) for the Green Line project to the CPUC according to the requirements of GO 164-D. SRTD submitted

the SCVR for the Green Line project to CPUC on June 6, 2012. CPUC sent a letter dated June 14, 2012, to SRTD to approve the SCVR and revenue service for the project.

11. SRTD has not compiled the SCVR for SSCP 2 yet because this project is not complete. SSCP 2 is currently in its construction phase. The SRTD representatives estimated that the SCVR for SSCP 2 will probably be completed in September 2015.
12. Both the Safety and Security Management Plan (SSMP) and the SC Plan for SSCP 2 address the safety certification management, including organizational authority and responsibilities, for SSCP 2, but the SC Plan is not as detailed as the SSMP in this area. The Green Line project didn't have a SSMP, because it is not required. The SC Plan for this project addresses safety certification management.
13. The SC Plans for both projects identify the process used to verify and document conformance with safety and security requirements during design, construction, testing, and operational readiness for each project. For SSCP 2, this is covered in more detail in the SSMP for the project.
14. The Green Line project was not funded by FTA; it was funded by local county monies. Therefore, this project was not overseen and approved by FTA and its PMOCs. Only CPUC approved it. The SSCP 2 is being overseen by FTA and its PMOCs. Every quarter, SRTD has quarterly meetings with FTA, PMOCs, and CPUC to discuss the details of the SSCP 2. SRTD submitted the latest version of the SSMP for SSCP 2 to FTA and PMOCs on August 9, 2013. CPUC approved the SC Plan for the project and will approve the SCVR after its submittal.
15. For the Green Line project, SRTD hired a design builder (contractor) to handle the project, including designing and construction. After the contractor completed their work for the project, SRTD performed safety certification verification of the project. SRTD's system safety staff met with the contractor approximately 2 hours a day around the end of the project to complete the safety certification process for the project. The contractor administered the certification program for this project more so than SRTD.
16. The certification program for SSCP 2 will be administered in-house by SRTD. For this project, SRTD hired a contractor to design it and another contractor to build it.
17. SRTD doesn't have a certification committee. Their Rail Activation Committee (RAC) is equivalent to a certification committee. RAC is an in-house committee that handles the safety certification of projects. SRTD had the RAC for the Green Line project that started near the end of construction. The RAC for SSCP 2 will be activated approximately in July 2015, a few months before the beginning of revenue service. The designated CPUC representative to SRTD will be invited to RAC meetings for SSCP 2 when these happen as he was before for the Green Line project.
18. The certifiable items lists for both projects are created as part of their SC Plans.
19. Based on the information SRTD system safety has, all designs have been reviewed, stamped, and sealed by a licensed Professional Engineer. SRTD's engineering department oversees the contract consultants and makes sure the consultants' engineers' design meets SRTD's design criteria, which are set by SRTD Professional Engineers.
20. SRTD analyzes design changes and Non-Conformance Reports (NCRs) for safety impacts,

and these have been thoroughly documented. Anything that deals with design changes is brought forth and addressed in the weekly progress meetings for projects. If changes are not resolved in these meetings, they get moved to the Change Control Board (CCB), which will determine if they can be resolved there. The CCB makes sure NCRs don't have impacts on safety or design criteria. If NCRs impacts those or if changes deviate from design criteria, the Change Review Committee will evaluate them for resolution and these will be documented in the safety certification process. Design changes are documented in the weekly progress meetings for projects, and SRTD has databases maintained by project management that contain all review process documents for both projects covered in this checklist.

21. Training specific to the opening of the Green Line project is part of the safety certification process for that project. Per SRTD representatives, all affected employees have been trained specific to this project, and SRTD will do the same for SSCP 2.
22. Integrated testing was developed for the Green Line project and administered. SSCP 2 is not complete, so a testing program for this project has not been developed yet.
23. SRTD's GM is required to formally sign and certify the project complete and safe for operations for both projects reviewed. SRTD sent the cover letter for the SCVR for the Green Line project signed by SRTD's GM along with the SCVR package to CPUC on June 6, 2012, requesting CPUC to approve the SCVR and revenue service for the project. SSCP 2 is not done yet. It is estimated to be completed in September 2015. Once it is done, SRTD will also send the cover letter for the SCVR for the project signed by SRTD's GM along with the SCVR package to CPUC.
24. SRTD's system safety department oversees everything related to safety certification throughout the lives of major projects. The safety certification activities they are involved in are mentioned in the SC Plans for major projects. In the beginning of major projects, the safety department writes the SC Plans for projects, submits these to CPUC for approval, and works through safety certification until project completion. When a project is complete, the safety department submits the SCVR for the project to CPUC for approval and any outstanding items will be tracked in HRFLSC meetings until completion.

Staff interviewed SRTD's SSCP 2 Project Manager to discuss how safety concerns were addressed and the level of interaction with the Safety Department pertaining to SSCP 2. Staff noted the following from the interview:

1. SRTD has a list of roles and responsibilities related to safety of SSCP 2. This list is distributed to SRTD managers involved in the project. It describes their safety-related duties for that project.
2. Safety concerns for SSCP 2 are addressed in meetings. For this project, SRTD has weekly progress meetings, monthly safety meetings that discuss everything that is specific to safety, and FTA quarterly meetings. SRTD generates and maintains the minutes for these meetings. Safety is one agenda item in the FTA quarterly meetings, which CPUC staff attends. There is always a SRTD safety representative in all of the meetings mentioned above that the project

staff holds or participates in.

3. The project has a SRTD safety manager and a contractor's safety manager on the project site, who can bring forth any project related issues they want such as design, construction, and employee safety issues. The safety managers are involved in, oversee, and ensure the safety of all aspects of the project. The SSCP 2 Project Manager is responsible to ensure the safety of the project and cooperates with the safety department to make sure all issues from the project are fixed.
4. The SSCP 2 Project Manager interacts with the safety department on a regular basis. SRTD is gearing up for safety certification of the SSCP 2 project, which is a joint effort between the safety department and SRTD project staff. There is good interaction between SRTD project staff and safety department on both the SSCP 2 and Green Line projects.

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	9	Element	Safety Data Collection and Analysis
Date of Audit	June 3, 2014	Department(s)	Safety Department
Auditors/ Inspectors	Claudia Lam Robert Hansen Daniel Kwok Michael Warren	Persons Contacted	Rufus Francis, Director of Safety Rob Hoslett, Senior Safety Specialist

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP), dated January 2014
3. Rail Accident Investigation Procedures

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Safety Data Collection and Analysis

Interview the SRTD representative(s) responsible for safety data acquisition and analysis, and review the safety data acquisition and analysis program requirements to determine whether:

1. The data collected includes, at minimum: information concerning SRTD accident and incidents, employee performance failures, equipment failures, and procedural deficiencies.
2. The safety data is supplied by, and collected from, all departments, including Operations, Risk Management, and Maintenance, as appropriate.
3. The safety data collected is analyzed and incorporated into SRTD's Hazard Identification and Resolution Process as necessary.
4. The safety data and analyses are made available to SRTD departments for use in planning their safety-related activities.
5. Periodic reporting regarding the results of the safety data analysis is provided to the SRTD Senior Management as appropriate.
6. Safety data sources identified in the SSPP are being used includes data analysis and distribution are being implemented. Possible sources include:
 - a. Claims databases;
 - b. Daily activity reports;
 - c. Hazard Identification Forms;
 - d. Unusual Occurrence Logs;
 - e. Accident/incident reports;
 - f. Customer service inputs;
 - g. Audits;

- h. Departmental performance reports;
 - i. Mining of maintenance records and documentation (including work orders); and Police Reports.
7. Review the safety data acquisition and analysis program requirements, records, and reports to determine if:
 - a. The data collected includes, at minimum, information concerning SRTD rail transit accidents and incidents, employee performance failures, equipment failures, software failures, procedural deficiencies, external factors contributing to failures, environmental factors contributing to failures, accidents/incidents involving fatalities and/or injuries, accidents/incidents resulting in property damage, and accident/incidents resulting in environmental damage.
 - b. The safety data is supplied by and collected from all departments including Operations, Legal, Risk Management, and Maintenance as appropriate.
 - c. The data collected is then analyzed and, if necessary, incorporated into the SRTD's hazard identification and resolution process.
 - d. The data collected and the resulting analyses are made available to all SRTD departments for use in planning their safety-related activities.
 - e. Monthly or quarterly reporting regarding the results of the safety data analysis is provided to the SRTD's Executive Leadership as appropriate. The SSPP may establish a regular cycle of safety data analysis and reporting for internal and/ or external distribution. Verify that the analysis and distribution process is being implemented as described.
 8. Interviews with SRTD Senior Management
 - a. Ask the representatives to explain how they receive safety-related information from other departments, including the operations and maintenance departments.
 - b. Ask the Safety Department representatives to provide examples of how information received from the Operations and Maintenance departments was used to support safety data collection and analysis activities.
 - c. Ask the SRTD Safety Department representatives to explain how they collect information on derailments and rules violations in the SRTD's yard.
 - d. Ask the SRTD Safety Department how it ensures the quality and integrity of collected safety data.
 - e. Ask the SRTD Safety Department representatives to explain how SRTD reports to FTA's National Transit Database (NTD).
 9. Interview SRTD representatives from Operations and Maintenance and ask them to explain how safety data collected by their personnel and in their information systems is shared with the Safety Department and other SRTD departments. For example, has the Wayside Maintenance of department identified any problems related to what may be poor quality Track components (i.e., track inserts, concrete ties, plates, etc.) and has this information been shared with the procurement department to assure different vendors are used in the future.
 - a. Ask SRTD representatives to provide examples of this process, including data from

inspections that may indicate quality or maintenance issues.

10. Field Observations:

- a. Ask a Safety Department representative to review and demonstrate the automated systems used by SRTD to report, analyze and track safety data.
- b. Ask Operations and Maintenance department representatives to review and demonstrate the systems used by their departments to report, analyze, and track safety.

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed the Senior Safety Specialist, regarding Safety Data Collection and Analysis Program and reviewed relevant program documentation. Staff determined the following:

1. Due to manpower shortage, SRTD is not using TransitSafe software for rail safety data as stated in its SSPP. The Safety Department tracks accident data using excel and it is upgrading it to MS Access.
2. SRTD collects safety data from a variety of sources such as claims database, hazard identification forms (Safe 1, Safe 2), accident reports, customer service inputs, audits, etc. Safety data includes information such as SRTD accident, employee performance failures, equipment failure, and procedural deficiencies.
3. SRTD conducts monthly Hazard Resolution Fire/Life Safety Committee (HRF/LSC) to discuss hazard safety issues. Staff reviewed documentation showing how SRTD collects, analyzes, and incorporate safety data into its Hazard Identification and Resolution Process. However, some safety data sources identified in the SSPP are not being fully analyzed. No documentation was shown for trend analysis as specified in its SSPP. This is a recommendation issued for Checklist 6 (Hazard Management Process).
4. Safety committee discusses hazards and key performance indicator (KPI) is prepared and distributed specifically for board meeting. KPI generates the reports per NTD and CPUC database and reports are made available to senior management.
5. KPI monthly Statistics report issued annually. Quarterly meeting talks about the KPI monthly.
6. Some safety data sources identified in the SSPP are not being used such as Daily activity reports, Unusual Occurrence Logs, Mining of maintenance. Other safety data sources currently being used include: claim databases, hazard identification forms (Safe 1, and Safe 2), accident reports, customer service input, audit, departmental performance reports, and police reports. AS400 (old database) for claims database and Risk department deals with claims database.
7. According to SRTD safety manager, all departments belong to HRF/LSC meet monthly to collect, transfer the data, and assign responsibility. In addition, Action reduction committee discusses and reduces the hazards.
8. No safety data is collected from legal. Other safety information such as equipment failures are captured by configuration management. Operation and maintenance departments collect

safety data through occurrence report.

9. According to SRTD safety manager, safety information on derailments and rules violation in the SRTD's yard are captured in occurrence report. Derailment committee is formed as needed to discuss the incident. Copies of the reports are copied to safety department. All collected information are shared and discussed during HRF/LSC.
10. Safety management is responsible for the quality and integrity of collected safety data. In addition, Internal Safety Audit (ISA) and CPUC's Triennial Safety Review also check for the quality and integrity of the data.
11. Wayside has its own weekly/monthly meeting to discuss operating issues. Employees use Safe 1 and Safe 2 to report injuries and hazard respectively. Operation and maintenance departments collect safety data such as poor track quality components through occurrence report and discuss the hazards during HRF/LSC meeting and configuration management meeting.

Findings:

None

Comments:

SRTD should update its SSPP if the reports and database are no longer being used. For example, TransitSafe software, Daily activity reports, Unusual Occurrence Logs, Mining of maintenance.

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	10	Element	Accident/Incident Investigations
Date of Audit	May 28, 2014	Department(s)	Safety Department
Auditors/ Inspectors	Debbie Dziadzio Steve Espinal	Persons Contacted	Shannon Hurley Rodney Hunter Vern Barnhart Rob Hoslett

REFERENCE CRITERIA

1. General Order 164-D
2. General Order 172
3. Code of Federal Regulations, Title 49 Parts 659.33 – Accident notification, 659.35 – Investigations, and 659.37 – Corrective Action Plans
4. SRTD Rail System Safety Program Plan (SSPP), dated January 2014
5. Rail Accident Investigation Procedures

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Accident/Incident Investigations

Interview the SRTD representative(s) responsible, and randomly select at least four CPUC-reportable accidents and/or incidents involving an injury or fatality to determine whether:

1. All accidents and incidents including security incidents were reported to CPUC according to the requirements in General Order 164-D.
2. All accidents and incidents were reported within two hours of occurrence, as required by General Order 164-D, Sections 7.1 and 7.2.
3. All immediately reportable accident or incident notifications to CPUC contained all the information required by General Order 164-D, Section 7.3.
4. All accidents and incidents were investigated in compliance with the requirements of General Order 164-D, Section 8, and SRTD's CPUC-approved AIIP.
5. Video recordings from inward-facing in-cab cameras are reviewed under the required conditions listed in General Order 172, Section 4.3.
6. A final report was submitted for each accident or incident according to the requirements in General Order 164-D.
7. Each final report includes identification of:
 - a. All items covered in the investigation;
 - b. Findings of the most probable cause(s);
 - c. Findings of contributory cause(s);

- d. CAPs to address the identified causes to minimize the probability of recurrence;
 - e. A schedule for implementing the CAPs, including completion date or plan for monitoring progress on an on-going basis.
8. Review the Accident Investigation Procedure developed by SRTD to verify that it:
 - a. Identifies primary roles and responsibilities for performing investigations consistent with the SSPP.
 - b. Includes processes for root cause analysis (this should include processes for accident scene investigation, equipment and vehicle inspection, interviewing of witnesses, etc.).
 - c. Identifies when external, specialized expertise is needed to identify root causes.
 - d. Identifies how the CPUC is involved.
 - e. Includes the review of rules and procedures that may have contributed to the accident.
 - f. Includes an assessment of the role that fatigue may have played in the accident, including work histories for involved employees.
 - g. Includes a process for developing CAPs that are consistent with the accident root causes.
 - h. Verify this process includes representatives from all necessary departments (i.e., Safety, Operations, Maintenance, and Engineering).
 - i. Includes a process for evaluating and implementing CAPs consistent with the Hazard Management Process.
 9. For the last 12 months, review the NTD reports filed with FTA by SRTD and compare them with RTA records and notifications to the CPUC:
 - a. Identify any discrepancies in reporting.
 10. For the last 36 months, review the notifications filed with NTSB by SRTD and compare them with RTA notifications to the CPUC:
 - a. Identify any discrepancies in reporting.
 11. Review accident reports from incidents occurring in the SRTD's rail yard:
 - a. What are the most commonly occurring incidents?
 - a. What corrective actions have been developed to address them?
 - b. Are any special monitoring programs in place to review yard accidents?
 12. Interview Safety Department representatives and discuss:
 - a. Past issues with the CPUC receiving required accident investigations reports on-time and what has been done to address them.
 - b. Coordination of investigation process with the CPUC.
 - c. Submission to the CPUC of all supporting reports and documentation that comprise the full accident investigation report.
 - d. Any other problems or issues with this process.

FINDINGS AND RECOMMENDATIONS

Activities:

1. Staff selected 4 reportable accidents/incidents that SRTD reported to CPUC to ensure compliance to General Order 164-D.

2. Staff reviewed reportable accident/incidents and found they were in compliance to General Order 164-D, Section 7.1 and 7.2.
3. Staff reviewed the above mentioned reports for compliance to General Order 164-D, Section 7.3 ensuring all required information is contained on the initial 2 hour report to CPUC.
4. Reviewed SRTD accident investigation reports for adherence to SRTD procedure SA-SOP-00-006.
5. Staff asked for the status regarding compliance to General Order 172, Section 7.3 and was advised that SRTD will be in full compliance by October 31, 2014, as required by CPUC.
6. Staff reviewed the aforementioned accident/incident reports and found that they contained a Final Report for each accident/incident.
7. Staff found the accident/incident reports to be compliant to General Order 164-D, Section 9.6 and SSPP, Section 10.7, dated January 2014.
8. Staff reviewed:
 - a. SOP-00-006
 - b. The process for root cause analysis including in-cab and station cameras, equipment/vehicle, track inspections, interview process (witnesses and Operators), operating rules and procedures.
 - c. N/A
 - d. SSPP for CPUC notification
 - e. See (b)
 - f. Reviewed SRTD fatigue management procedures
 - g. Reviewed SSPP and SOP to ensure the process is in place for developing CAPS
 - h. SSPP and SOP mandate all departments are included in CAPS development.
 - i. Referred to Hazards Management.
9. Staff reviewed NTD for 2012 and found SRTD in compliance.
10. Staff reviewed NTSB notification for past 36 months with CPUC database and found records to be in compliance.
11. Staff reviewed yard accidents/incidents for the past 5 years. SRTD advised that there were 2 yard derailments.
 - a. Misaligned switches (Maintenance Personnel).
 - b. Staff reviewed CAPS regarding the 2 yard derailments.
 - c. Staff reviewed monitoring program in place to review accidents.

Findings:

1. SRTD has routinely in the past (during this audit period) reported accidents without including rail transit vehicles involved or the emergency response organization at the scene. General Order 164-D, Section 7.3 d & f, states:

The Rail Transit Agency shall provide as part of the notification:

- d. The rail transit vehicles involved in the incident, if any;*
- f. The emergency response organizations at the scene of the incident*

Comments:

The 60 day EZ format should only be used for minor non-injury accidents.

Recommendations:

1. SRTD must include report all information required by GO 164-D, Section 7.3, when reporting accidents to the point of contact with the CPUC.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	11	Element	Emergency Management Program
Date of Audit	June 5, 2014	Department(s)	Operations Department Safety Department
Auditors/ Inspectors	Jimmy Xia Robert Hansen Michael Warren Daniel Kwok Yan Solopov	Persons Contacted	Rob Hoslett, Senior Safety Specialist Mark Sakauye, Security Administrator Vern Barnhart, Director of Light Rail Freddie Diring, Supervisor of Training Rodney Hunter

REFERENCE CRITERIA

1. General Order 164-D
2. Code of Federal Regulations, Title 49 Part 659.23 – System security plan: contents
3. SRTD Rail System Safety Program Plan (SSPP), dated January 2014
4. SRTD System Security Plan (SSP)
5. SRTD Light Rail Emergency Plan

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Emergency Management Program

Interview the appropriate SRTD representatives involved in SRTD’s Emergency Planning, Training, and Drill/Exercise Program, and review appropriate records to:

1. Solicit a process overview of the SRTD’s Emergency Planning, Training, and Drill/Exercise Program. Review specific examples of coordination with emergency response agencies on emergency planning and drills/exercises.
2. Assess the biggest challenges the Safety Department faces in coordinating or supporting SRTD’s emergency planning process.
3. Verify a drill/exercise schedule has been created and followed.
4. Verify emergency responders and other outside agencies participate in SRTD’s emergency planning as appropriate.
5. Determine when the last drill/exercise was performed, and whether a Post-Drill/Exercise Action Report was developed. Was the Post-Drill/Exercise Action Report used to make revisions to SRTD’s Emergency Familiarization Response Plan and/or Procedures through the Corrective Action Plan process?
6. Verify that Corrective Actions have been implemented by SRTD and the applicable Emergency Response Agencies.
7. Determine whether SRTD conducts periodic Fire Life Safety meetings with sheriff and fire

departments.

8. Determine whether Emergency Response Agencies have participated in emergency familiarization activities. Verify the following:
 - a. Documents include a description of the transit agency's activities with external emergency response agencies to support emergency planning and response.
 - b. SSPP and procedures clearly define SRTD personnel roles and responsibilities.
 - c. SSPP and procedures include a process for evaluating emergency drills and exercises.
 - d. The process is linked to the hazard management process requirements of the SSPP.
 - e. SSPP and procedures require the development of after action reports for all real-life emergencies and practice drills and exercises.
 - f. Review SSPP and procedures to verify that they include a description of the processes used to train local emergency responders.
 - g. Verify SSPP and procedures clearly document how and to whom updated emergency response procedures will be distributed.
9. Review any rules related to emergency response and determine if they have been updated to address current conditions and distributed to appropriate SRTD personnel.
10. Verify when applicable procedures were last reviewed and revised.
 - a. Determine who was involved in the review and revision process (safety, security, emergency responders, operations, maintenance, committees, contractors, CPUC, etc.)?
 - b. Determine if revisions were evaluated to ensure they would not create new hazards or system risks?
11. Verify SSPP and procedures define how often drills, table-tops, and field exercises will be performed.
12. SRTD emergency response training:
 - a. Review training programs to verify they contain training curriculums for emergency response procedures and activities appropriate for each job classification.
 - b. Review training programs to verify frequency of employee emergency response training and if this frequency is consistent with SSPP requirements.
 - c. Randomly select six (6) employees from the following safety sensitive job classifications and review their emergency response training records to verify who has been trained and that training has been properly documented:
 - Train Operators
 - Rail Supervisors
 - Rail Controllers
13. Verify the process through which emergency responders and other outside agencies are involved in the SRTD's emergency planning.
 - a. Review past documentation to verify that drill outcomes and evaluations were incorporated into response plans and procedures as appropriate.
 - b. Review records and documentation for the past 12 months to determine if:
 - SRTD has held periodic Fire Life Safety meetings with police and fire departments in the applicable SRTD jurisdictions.

- Emergency response agency familiarization activities have occurred as scheduled.
- Corrective actions have been implemented.

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed the appropriate SRTD representatives involved in SRTD's Emergency Planning, Training, and Drill/Exercise Program, and reviewed relevant records generated in the past three years as follows:

1. SRTD 2011 Save Our Fleet Terrorist Exercise After Action Report dated May 25, 2011, along with the sign-in sheets
2. SRTD 2012 Light Rail Exercise at Township 9 dated October 27, 2012, along with the sign-in sheets
3. SRTD Terrorist Exercise functional exercise plan (ExPlan) dated October 27, 2012
4. SRTD 2012 Bus and Light Rail Terrorist Exercise After Action Report dated March 4, 2013
5. SRTD 2013 Bus Terrorist Exercise dated August 23, 2013, along with the sign-in sheets
6. After Action Report for SRTD 2013 Bus and Light Rail Terrorist Exercise conducted on August 28, 2013
7. SRTD Green Line to the River District Project Certificate of Safety Compliance signed off on June 8, 2012, for the following certifiable element: fire/life safety training which includes the documentation for the accident response drill dated December 11, 2011

Staff noted the following from the interviews and records review:

1. The process overview of the SRTD's Emergency Planning, Training, and Drill/Exercise Program is covered in the SSPP, section 11, as well as in the SSP. Staff reviewed documentation listed above that shows SRTD's coordination with emergency response agencies on emergency planning and drills/exercises.
2. Per SRTD representatives, one of the biggest challenges the Safety Department faces in coordinating or supporting SRTD's emergency planning process is funding. Also, SRTD sometimes has problems acquiring resources such as role players for drills/exercises because of their availability problems.
3. A coordinated schedule is developed involving Light Rail departments and other outside agencies to conduct at least one emergency drill/table top per year at a minimum as required by the SSPP, but the date for each drill/table top will be determined when SRTD is ready for it. SRTD does follow the drill/exercise schedules they develop consistently.
4. Emergency responders and other outside agencies participate in SRTD's emergency planning in meetings and actual drills/exercises as appropriate. SRTD has different meetings related to their emergency planning. SRTD has planning meetings for participating agencies usually three to six months before actual drills/exercises. They usually have about eight planning meetings for every full scale exercise. SRTD representatives provided the month of October 2012 as an example, during which they had four meetings with smaller groups regarding the

Light Rail Exercise at Township 9 that occurred on October 27, 2012. In those smaller meetings, SRTD trains the people from participating agencies what to do for the drill/exercise. SRTD also has meetings with drill/exercise participants to train them for the drill/exercise. SRTD generates agendas/schedules and minutes for all of these meetings.

5. The last drill/exercise SRTD performed was the 2013 Bus and Light Rail Terrorist Exercise performed on August 28, 2013. An after action report was developed for that exercise. SRTD did not change any of their procedures as a result of that exercise.
6. Implementation of corrective actions by SRTD and the applicable emergency response agencies
 - a. Emergency Response Agencies (e.g. police or fire departments, other federal, state, and city agencies) are their own entities and SRTD has no control over these agencies' corrective actions. SRTD will verify that corrective actions have been implemented by these agencies only when SRTD asks for them.
 - b. All recommendations stated in SRTD 2011 Save Our Fleet Terrorist Exercise After-Action Report dated May 25, 2011 have been completed.
 - c. There are no recommendations stated in SRTD 2012 Bus and Light Rail Terrorist Exercise After-Action Report dated March 4, 2013.
 - d. There were 10 recommendations mentioned in the After Action Report for SRTD 2013 Bus and Light Rail Terrorist Exercise conducted on August 28, 2013. Per SRTD representatives, 4 out of the 10 recommendations from the report are done, and out of the remaining 6, SRTD will complete 2 of them. There is no policy or regulation that requires SRTD to complete any recommendations from emergency drills/exercises. SRTD completes recommendations from drills/exercises based on operational needs of SRTD. SRTD will track any outstanding recommendations once they start to complete them.
 - e. SRTD's system safety has a master spreadsheet which tracks recommendations that are required by GO 164-D, and they also add the Internal Safety Audit corrective action plans (CAPs) into the spreadsheet. If there are any emergency response related CAPs, they are added into the spreadsheet. Currently, there are no such CAPs.
7. SRTD holds monthly Hazard Resolution Fire Life Safety Committee (HRFLSC) meetings that don't involve sheriff and fire departments. SRTD doesn't have formal Fire Life Safety meetings with sheriff and fire departments, but SRTD will accommodate their request for such meetings and familiarization training.
8. Emergency Response Agencies have participated in emergency familiarization activities including full scale exercises and familiarization training (e.g. the fire/life safety training as part of the accident response drill conducted on December 11, 2011).
 - a. Exercise plans and after action reports include descriptions of SRTD's activities with external emergency response agencies to support emergency planning and response.
 - b. SRTD's SSPP and Light Rail Emergency Plan clearly define SRTD personnel roles and responsibilities. What SRTD does in emergency response is detailed in the Light Rail Emergency Plan. The plan is essentially a guide for SRTD employees for how to handle emergency situations when they occur.

- c. SRTD's SSPP includes a description of the process for evaluating emergency drills and exercises. SRTD doesn't have other procedures that include that process. They use federal guidelines or recommendations to evaluate emergency drills and exercises. After action reports document the evaluation of emergency drills and exercises.
 - d. The process as mentioned above is linked to the hazard management process requirements of the SSPP to some extent. If there is an emergency management related CAP deemed to be needing tracking, it will be tracked to completion. Anything in SRTD's rail transit system that is determined to be an Unacceptable Hazardous Condition (UHC) will be tracked using the hazard management process and be included in the master CAPs spreadsheet. If SRTD discovers an UHC within the realm of their Emergency Management Program, the UHC will be tracked accordingly to completion.
 - e. SRTD's SSPP requires the development of after action reports for all real life emergencies and practice drills and exercises. If SRTD has real life emergencies, they will report them to CPUC in accordance with GO 164-D. Real-life emergencies will be documented by emergency response agencies and reports related to emergencies will be generated by SRTD's operators and supervisors if needed.
 - f. Staff verified that SRTD's SSPP includes a description of the processes used to train local emergency responders.
 - g. SRTD's Light Rail Emergency Plan contains all of SRTD's emergency response procedures. The plan is distributed and available to SRTD's train controllers (TCs), who are responsible for overseeing the procedures to be accomplished in real emergencies. SRTD employees get directions from controllers on how to handle emergency situations during actual emergency situations. Under the direction of TCs, employees act in accordance with the procedures in the Light Rail Emergency Plan. TCs will go through the appropriate procedure checklists in the plan to see what needs to be done during real life emergencies as they are responsible for carrying out the activities in the checklists. Updated emergency response procedures are kept at the control room.
9. SRTD's 2011 Light Rail Rulebook, dated October 1, 2011, Section 7, covers rules related to emergency and safety pertaining to operators. SRTD reviews and updates the rulebook on an as needed basis. SRTD has notices that can last forever or temporarily or be incorporated into the rulebook.
10. SRTD's emergency response procedures are reviewed and revised on an as needed basis.
- a. SRTD's rulebook was last revised on October 1, 2011. SRTD's rulebook committee, which is comprised of personnel from SRTD's safety, operations, and LRV maintenance departments, a couple operators, and CPUC staff, is involved in the review and revision process for the rulebook.
 - b. Revisions to procedures related to emergency response were evaluated to ensure they would not create new hazards or system risks. The following describes the revision process for SRTD's rulebook. SRTD generates a draft of the revised rulebook and distributes it for input. SRTD takes comments from people from the rulebook committee and CPUC designated representative. The comments are reviewed, evaluated, and

incorporated as applicable. Then, SRTD sends the final version of the revised rulebook to CPUC. After that, the revised rulebook will be distributed to appropriate SRTD employees and SRTD will train their Train Operators (T/Os) on updates to the rulebook.

11. SRTD's SSPP section 11.2 states that SRTD will conduct at least one emergency drill, table top, or field exercise every year.
12. SRTD emergency response training:
 - a. SRTD trains their safety sensitive employees on the emergency response procedures as mentioned in the rulebook, section 7, on a regular basis.
 - b. SRTD's SSPP doesn't list the frequency of employee emergency response training. SRTD's T/Os get trained in the entire rulebook, which includes rules related to emergency response once per year. SRTD's vehicle maintenance employees get trained in the rulebook once every 18 months, and the wayside maintenance employees get trained once every two years. The frequency of training is consistent with SSPP requirements.
 - c. Emergency response training for SRTD's safety sensitive employees is carried out through the periodic rulebook training. Checklist 15-E of the audit covers training and certification programs for operators, controllers, and supervisors. The finding related to question #12c of this checklist is documented in checklist 15-E.
13. Staff verified the process through which emergency responders and other outside agencies are involved in the SRTD's emergency planning as follows:
 - a. Staff reviewed the after action reports for the emergency drills/exercises SRTD conducted in the past three years as listed above, and outcomes and evaluations as documented on the after action reports were incorporated into SRTD's response plans and procedures as appropriate.
 - b. Staff reviewed records and documentation related to the emergency drills/exercises SRTD conducted in the past three years and determined the following:
 - In the last three emergency exercises SRTD conducted in the last three years that staff reviewed, SRTD had about eight meetings with representatives from police and fire departments in the applicable SRTD jurisdictions for each exercise prior to the exercise. For each exercise, SRTD conducts the exercise, a "hot wash" or "after action discussion" (review and critique the exercise and the results) right after the exercise, and then, an after action meeting with representatives from participating agencies sometime after the exercise to discuss the results with an emphasis on looking for anything that can help SRTD prepare the next exercise as best as they can.
 - In the past three years, emergency response agency familiarization activities including drills/exercises and all meetings associated with these have occurred as scheduled.
 - All corrective actions that resulted from SRTD's emergency management process have been implemented except for two from the 2013 Bus and Light Rail Terrorist Exercise conducted on August 28, 2013. SRTD will address those two corrective actions as appropriate in the near future.

Findings:

None

Comments:

1. Staff found that the HRFLSC doesn't serve as the liaison between SRTD and fire departments and other emergency response agencies as mentioned on page 29 under Section 5.4.6 of the SSPP. SRTD's Senior Safety Specialist agreed that system safety will evaluate that statement in the SSPP and make any change as necessary to reflect what the HRFLSC is responsible for in actuality.

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	12	Element	Internal Safety Audits/Reviews
Date of Audit	June 4, 2014	Department(s)	Safety Department
Auditors/ Inspectors	Jimmy Xia Robert Hansen	Persons Contacted	Rufus Francis Rob Hoslett

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014
3. SRTD Internal Safety Audit (ISA) 3-year Schedule

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Internal Safety Audits/Reviews

Interview the appropriate SRTD representatives involved in ISSAs, and review appropriate records to:

1. Determine if a three-year internal audit schedule was developed and submitted to CPUC.
2. Internal safety audit procedures have been developed and submitted to the CPUC for each audit area.
3. The internal safety audits have been performed as scheduled and submitted to the CPUC.
4. The scope of audit activities includes the required elements specified in GO 164-D.
5. Verify that all elements of the SSPP were evaluated within the past three years.
6. Verify that each audit lists the involved SRTD departments, the safety-related activities addressed, and the reference criteria for the audit.
7. Determine whether the ISA's adequately address interdepartmental and interagency communication issues, and whether or not SRTD has a process for addressing, overcoming non-responsiveness of departments and failures to implement audit recommendations.
8. Determine how expertise for auditing specific functions such as track or signal inspections is evaluated, and how personnel are assigned per the SSPP to ensure the rigor and quality of the internal safety audit.
9. An Annual Report has been submitted to the CPUC for each of the last three (3) years documenting the results of the internal safety audit process.
10. Verify that audits have been properly documented and with references for documents, activities reviewed criteria for evaluation, and notes to support findings and recommendations.

11. Verify the Annual Reports are accompanied by letters from the GM/CEO stating SRTD's compliance status with the SSPP and Corrective Action Plans for elements determined not to be in compliance.
12. Corrective actions to address findings from the process were scheduled and implemented.
13. Verify that SSPP includes a description of the processes used by SRTD to perform internal safety audits.
 - a. Verify this process is consistent with Part 659 and the CPUC's requirements.
 - b. Verify this process is fully endorsed by the GM/CEO.
 - c. Verify the internal safety audit process and any findings are tied to the hazard management process defined in the SSPP.
 - d. Verify internal safety audit process findings are analyzed to determine if they pose a hazard.
14. Review any rules related to the conduct of the SRTD's internal safety audit process and determine if they have been updated to reflect current conditions and distributed to appropriate SRTD personnel.

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed SRTD representatives involved in SRTD's ISSAs and reviewed the following records and letters from 2011 to present:

1. SRTD's Internal Annual Rail System Safety Audit Reports for the Years 2011, 2012, and 2013 issued on February 9, 2012, January 15, 2013, and February 5, 2014, respectively
2. Letters from SRTD's General Manager stating the status of SRTD's compliance with the SSPP, SSP and its Corrective Action Plans (CAPs) that resulted from the ISSAs dated February 9, 2012, January 17, 2013, and February 5, 2014
3. The latest version of the spreadsheet showing the statuses of all of SRTD's CAPs relevant to CPUC
4. A binder titled SRTD Annual Internal System Safety Audit for the 2013 ISA audit items #1 thru #8 scheduled to be audited from November 4, 2013, thru November 8, 2013
5. The Audit Participant's Binder for SRTD Annual Internal SSPP Audit Item #3 – Training and Certification Review Process scheduled on November 5, 2013

Staff noted the following from the interviews and records review:

1. The three-year internal audit schedules for the 2011-2013 and 2014-2016 ISSA cycles were developed. The three-year internal audit schedule for each ISSA cycle is submitted to CPUC as part of the annual ISA reports (Appendix C) by February 15th of every year as required by GO 164-D.
2. The complete three-year ISSA cycle that is available for review for this audit is 2011-2013.
3. SRTD has an Internal Safety Audit Program Standard Operating Procedure (SOP)

SA-SOP-06-007, Revision 103106-A. SRTD is in the process of revising this SOP to version B.

4. In addition to that SOP, the ISAs to be conducted in a given year, SRTD puts together a binder that contains the schedule for the audits to be conducted for the year, checklists for each audit element, the format of which is similar to CPUC's triennial review checklists, the audit questions for each checklist, and the reference materials for each checklist before the audits start. This binder is also known as the "master binder" for the ISAs to be conducted in a given year. SRTD gives a copy of such a binder to the designated CPUC representative for all the annual ISAs. SRTD aims to complete these binders and submit them to everyone involved in the ISAs including the CPUC rep at least two weeks prior to starting the ISAs to be conducted in a given year.
5. Also, each SRTD employee (auditors and auditees) involved in the ISAs will get an Audit Participant's Binder before the audits that contains the audit schedule for the year, all of the checklists they are involved with, the audit questions for their checklists, and reference documents for their checklists.
6. The 2014 ISA "master binder", which is mentioned above, has not been completed yet. SRTD has all the reference materials for the 2014 ISAs and the three-year schedule for the 2014 –2016 ISA cycle, but not the audit checklists and associated questions. SRTD will start the 2014 ISA process after the 2014 CPUC's SRTD Triennial Review is finished. The SRTD representatives said that maybe SRTD will finish the 2014 ISA's by the end of 2014.
7. The ISAs have been performed according to the yearly ISA schedules and detailed individual audit schedules. The ISAs are performed according to SRTD's ISA Program SOP (e.g. ISAs are conducted using checklists and associated questions to ask).
8. The scope of audit activities includes the required elements specified in GO 164-D. SRTD audits all 21 SSPP elements specified in GO 164-D in each of their three-year ISA cycles according to their yearly ISA schedules.
9. Staff verified that all elements of the SSPP were evaluated within the past three years (2011 – 2013).
10. Staff verified that the checklists for the ISAs list the involved SRTD departments, the safety-related activities addressed, and the reference criteria for the audits.
11. Any problems or disagreements with findings from the ISA reports issued will be reviewed by the Executive Management Team and if the issues cannot be resolved, they will be elevated to the General Manager (GM)/CEO for final decision. The GM/CEO will resolve any contested issues that arise from the audits conducted. The final ISA report with approved recommendations and action plans will then be provided to all departments for implementation.
12. Interdepartmental and interagency communication is carried out through the SRTD's monthly Hazard Resolution Fire Life Safety Committee (HRFLSC) meetings, which CPUC staff attends and in which they provide support and recommendations as necessary. There is continuous follow-up within SRTD until all ISA recommendations are done. Mostly, SRTD's safety department has good cooperation with various SRTD departments, and the departments provide timely responses on resolution of audit recommendations. SRTD

personnel discusses all items that are still open including the statuses of progress of open CAPs (e.g. those from ISAs and triennial audits) during the HRFLSC meetings. SRTD staff can bring up open items from ISAs at these meetings. These meetings are a means of getting responses on ISA recommendations from departments when they are not providing timely responses.

13. SRTD's formal process to complete the ISA CAPs is carried out via email. Sometimes, SRTD's system safety specialist sends reminders to SRTD departments to complete the ISA recommendations they are assigned to. When he sends these reminders to departments depends on individual cases. Departments usually contact the system safety specialist regarding how to deal with certain CAPs they are assigned to or when they forget what they are supposed to do to implement their CAPs.
14. SRTD usually picks the most knowledgeable and experienced personnel for auditing specific functions such as track or signal inspections. The system safety department prepares these personnel for the audit; they work with them to develop the checklists for auditing such specific functions. The personnel selected are independent from the first line of supervision responsible for performance of the activity being audited.
15. SRTD assigns personnel to be IS auditors based on their knowledge, skill set, expertise, and experience to ensure the quality of the ISA's. The personnel assigned are usually from SRTD itself. SRTD makes sure the auditors are qualified and that the audits fit their schedule, and SRTD gives them the amount of time they requested to complete their audits.
16. An Annual Report has been submitted to the CPUC by February 15th of each of the last three (3) years (2011-2013) as required by GO 164-D, documenting the results of the internal safety audit process. These annual reports with their dates of issuances are listed in item #1 under the Activities section above.
17. The ISAs have been properly documented in the ISA reports. The completed checklists in the ISA reports include references for documents and activities reviewed, criteria for evaluation, and the results that are derived from the notes the auditors generated while conducting audits. The auditors generate notes on the audit question forms while conducting audits and after the audits are finished, system safety uses the notes to compile results, findings, and recommendations if any from the audits in ISA reports.
18. Annual Reports for the 2011-2013 cycle were accompanied by letters from SRTD's GM stating the status of SRTD's compliance with the SSPP and SSP and its CAPs that resulted from the ISSAs dated February 9, 2012, January 17, 2013, and February 5, 2014.
19. CAPs that resulted from the 2011-2013 ISA cycle were scheduled and implemented. In fact, all of the CAPs from the 2011-2013 ISA cycle are closed as of the date of this audit as shown on the latest version of the spreadsheet showing the statuses of all of SRTD's CAPs relevant to CPUC.
20. Staff verified that the SSPP includes a description of the processes used by SRTD to perform ISAs and that this process is consistent with Title 49 CFR Part 659 and the CPUC's requirements. Staff verified this process is fully endorsed by the SRTD's GM as he signed off on the SSPP.

21. Anything from the ISAs that are hazard related will be discussed at the monthly HRFLSC meetings. The ISA process and any findings are tied to the hazard management process by means of those meetings.
22. SRTD discusses ISA findings at the monthly HRFLSC meetings. If any finding rises to the level of a hazard, it will be brought to further review and addressed by the appropriate parties. All of the previous ISA CAPs from the 2011-2013 audit cycle are about documentation and procedures that are not related to hazards. Whatever that will be done to resolve any potential hazards found from ISAs will be put into CAPs. CAPs are discussed at the HRFLSC meetings until they are completed.
23. The rules related to the conduct of SRTD's ISA process can be found in the Internal Safety Audit Program SOP and the SSPP. The Internal Safety Audit Program SOP is scheduled to be revised pending the completion of the CPUC's 2014 SRTD Triennial Review. The SSPP has been updated on January 30, 2014. Both of these documents are available on the SRTD Intranet site and SRTD employees can access these if they have computer access. The employees without computer access can ask their supervisors for electronic or hard copies of these documents.

Findings:

None

Comments:

SRTD's SSPP, Section 12.3.5 states that the final audit report to be issued every year includes a summary of required corrective actions (if any). However, SRTD doesn't include CAP forms for any recommendations from the ISAs in the final audit reports in actual practice. The SRTD representatives agreed to revise that section of the SSPP in order to address this discrepancy (e.g. it would be better for SRTD to remove the part that says corrective actions will be included as part of the audit report and add something like "CAPs will be submitted separately and be tracked using the corrective action process after submission of the ISA report to CPUC").

Checklists 14-F and 21 identify testing equipment, where re-calibration was well beyond the due date. Additionally, several checklists found that fire extinguishers throughout SRTD's vehicles and property were mostly expired and beyond recharging date. It is troubling that SRTD's internal audit did not identify the pending expiration and address these deficiencies so that the Procurement Department could order the needed equipment servicing and fire extinguisher servicing before the actual expiration which was within the following month. SRTD should assure these areas are adequately covered during its internal safety audits and address findings of that audit before deficiencies and noncompliance occur,

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	13-A	Element	Rules Compliance: Observation and Enforcement
Date of Audit	May 29, 2014	Department(s)	Operations Department Maintenance Department
Auditors/ Inspectors	Debbie Dziadzio	Persons Contacted	Vern Barnhart Shannon Hurley Rodney Hunter Laura Espinoza

REFERENCE CRITERIA

1. General Order 164-D
2. General Order 172
3. SRTD Rail System Safety Program Plan (SSPP) dated January 2014
4. SRTD Rulebook
5. SRTD Personal Electronic Device Policy
6. LR Operator Efficiency Testing, LR-SOP-12-201

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Rules Compliance: Observation and Enforcement

Interview the appropriate SRTD representatives and review appropriate records to:

1. Verify that SRTD performs formal observations of controllers and operators as specified in the SSPP.
2. Verify SRTD performs observation of Maintenance Employees as specified in the SSPP and/or supporting procedures.
3. Verify that SRTD has conducted random evaluations regarding personal electronic device use as required by General Order 172, Sections 4.3.e, 4.5, and 6.2.
4. Verify that operations and maintenance employees are evaluated based on their performance during unannounced observations to assess their compliance with safety rules, procedures, and/or practices.
5. Determine whether any accidents/incidents were determined to have resulted from inadequate operations procedures and verify appropriate Corrective Action Plans (CAPs) were implemented in response.
 - a. If so, verify what steps were taken to correct these issues (i.e., employee retraining, suspension, dismissal, etc.).
6. Determine how SRTD performs efficiency testing of operating and maintenance personnel as well as verify CAPs are implemented when appropriate

7. Determine whether SRTD has developed and implemented a zero-tolerance policy and program regarding personal electronic device usage, as required by General Order 172, Section 5.
8. Verify that Hazard Resolution Committee receives reports from Operations and Maintenance Departments regarding rules compliance assessment and testing. Are hazards identified from the rules compliance process, reported to the Hazard Resolution Committee, and tracked through the Hazard Management Process?
9. At random, select several operating procedures (4 or 5) and ride the system to verify that these rules are being followed (such as performing station announcements, look-back procedures, or end of line vehicle inspections, etc.).
10. Review SRTD appropriate program documentation, and ensure that the following are addressed:
 - a. Medical Monitoring
 - b. Fatigue Management
 - c. Over-the-Counter Medications
 - d. Stress
11. Review documentation to verify that supervisors are citing operating and maintenance personnel for rule violations. If there is no record of employees being disciplined for failing to follow a rule or procedure, then the supervisor is not likely performing these activities appropriately.
12. Interview operations and maintenance supervisory staff to determine how they monitor employee compliance with rules and procedures.
13. Interview operations and maintenance supervisory staff to determine their familiarity with rules and procedures.
14. Conduct random interviews of operators and mechanics to verify how often they receive training on rules and procedures and how the transit agency monitors their compliance with rules and procedures.
15. Conduct a random sample inspection of transit operators to determine if they are carrying their rulebook, if they have the proper safety equipment in their cabs, and if their radios are functioning.
16. Accompany a light rail supervisor personnel during compliance checks and assess how these checks are conducted and ensure that final reporting matches the findings in the field.

FINDINGS AND RECOMMENDATIONS

Activities:

1. Staff reviewed LP-SOP-12-201 – LP Operators Efficiency Testing. SRTD’s efficiency testing program is broken down into 3 levels. Level I – Evaluates operating rules and procedures three times per year; Level II – Reviews the operator’s performance for the past 6 months twice per year; Level III – Evaluates performance regarding rules governing signal aspects (banner test) once per year. Staff reviewed records regarding all efficiency testing levels.

2. Staff reviewed SSPP January 2014 Section 13.4 and 13.6 and spoke to LRV Maintenance Superintendent regarding performance observations.
3. Staff reviewed SRTD PED Policy and observation records regarding PED use.
4. Staff reviewed Operations Efficiency Program plus conversed with Management Staff from both Operations and Maintenance.
5. Staff interviewed Operations and Maintenance Supervision regarding accidents/incident and appropriate CAPS and was advised that all department heads are included in the tracking process that is referred to in Checklists #6 and #10.
6. Staff reviewed SRTD's SSPP, Rule Book, LP-SOP-12-201, and interviewed Ops and Maintenance Staff to determine how SRTD performed efficiency testing for personnel and verify the process for appropriate CAPS to be implemented.
7. Reviewed SRTD's Personal Electronic Device Policy
8. Reviewed HRFLSC minutes to determine if compliance assessments are identified and tracked.
9. Staff rode the system on two occasions. Staff's observations were on station announcements, berthing placement, interior lighting, LRV ditch and headlights, CPUC GO 172.
10. Staff reviewed SRTD's EAP, including EAP's Peer to Peer Support, Worker's Comp, and Over-the-Counter Medications Documentation.
11. Staff interviewed both Operations and Maintenance Supervision regarding monitoring of employee compliance to rules and procedures.
12. Staff interviewed Operations and Maintenance supervisory personnel in the knowledge of SRTD Operating Rules and Procedures.
13. Staff interviewed 10% of LRV Operators and 3 Mechanical personnel.
14. Staff randomly sampled 10% of LRV operators inspecting for: rulebook, current timetable, current operations bulletin, emergency/accident package, a working watch set to SRTD OCC time, functioning radio, CA DMV Class B license, Medical Card, VTT Card, set of keys, in proper uniform.
15. Staff accompanied a Supervisor during his compliance checks.
16. Operations Department evaluates their employees in compliance to safety rules, procedures and practices via a formalized efficiency testing and observation program. Maintenance Department does not have a formal program; however, they observe daily the operating practices of their employees. When a non-compliance is observed, there is verbal communication, and/or more severe discipline, depending on the observation.
17. SRTD has a zero-tolerance policy regarding PED in accord with General Order 172.
18. HRFLSC minutes revealed that all department heads are present, including the COO during this monthly meeting. The minutes showed that the committee does track compliance assessments. Refer to Checklist #6
19. All observations were compliant to Federal and State regulations and carrier operating rules and procedures.
20. Staff found all areas; medical monitoring, fatigue management, over the counter meds, stress, were addressed in the documentation.

21. Although Operations has a formal process to monitor compliance via the efficiency testing program, both departments follow rules and procedures as per SRTD's Operating Rule Book and the SOP's for each department, and also bargaining agreements with their unions.
22. All personnel interviewed were well versed in SRTD Operating Rules and Procedures as well as Federal and State regulations.
23. Both LRV Operators and Mechanical personnel advised they receive yearly training in the Operating Rules and Procedures. The Operators knew the levels utilized by SRTD to monitor their compliance. Maintenance personnel were unfamiliar with any formal observations regarding operating rules compliance but all mentioned daily conversations between SRTD supervisors and employees regarding safe and/or unsafe procedures.
24. All Operators possessed all items requested during the inspection.
25. The Supervisor performing the compliance checks was extremely knowledgeable. The supervisor covered all areas, i.e. ADA, Emergency Call Button, speed checks, sounding gong before departing station, sounding horn thru grade crossing, operator inspection (rule book, keys, timetable, bulletin, working radio, etc.) The report was consistent with the inspection ride.

Findings:

1. Records reviewed per year:
 - a. 2014 (70 Operators) – 10 records reviewed. Of the 14% reviewed, 80% were non-compliant. Level I performance evaluations were missing.
 - b. 2013 (68 Operators) – 7 records reviewed. 100% compliant.
 - c. 2012 (64 Operators) – 7 records reviewed. Of the 11% reviewed, 29% were non-compliant. Level I performance evaluations were missing.
 - d. 2011 (59 Operators) – 6 records reviewed. 100% compliant.
2. SRTD Maintenance Department does not have a formal observation program to ensure rules compliance. Daily, Supervisors will observe, and coach and counsel (formally, informally) regarding unsafe practices and procedures. There is no formal documentation system for these compliance checks and no data is forwarded to Safety Department for data and trend analysis, nor are the informal observations otherwise documented in the individual's personnel/training file.

Comments:

None

Recommendations:

1. Currently Group Supervisors perform the efficiency tests on SRTD's operators. The Group Supervisors should be refreshed/retrained on the frequency of the various levels of testing to assure the testing is completed in a timely manner and in accordance with established procedures.
2. The Maintenance Department, working with Safety Department, needs to initiate a formal

rules compliance/operations evaluation system as per the SSPP, for maintenance individuals, as it does for operations personnel..

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	13-B	Element	Rules Compliance: Operations Safety Compliance
Date of Audit	June 4, 2014	Department(s)	Operations Department Safety Department
Auditors/ Inspectors	Debbie Dziadzio Daniel Kwok Michael Warren	Persons Contacted	Shannon Hurley Rodney Hunter Rob Hoslett

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014
3. SRTD Rulebook
4. SRTD Personal Electronic Device Policy

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Rules Compliance: Operations Safety Compliance

Interview SRTD safety and operations representatives, observe and inspect operations, and review appropriate records to determine whether:

1. Maintenance Workers:
 - a. Are in compliance with rules, examples include verifying that mechanics are wearing appropriate Personal Protective Equipment, that they are using and storing hazardous materials correctly, or that safety signs, barricades as well as other warning systems are being used appropriately.
 - b. Know and understand the rules and procedures for mainline operations. Interview at least two individuals.
2. Controllers
 - a. Are properly preparing and maintaining records, reports, and logs;
 - b. Are performing duties in accordance with standard operating procedures, rule books, and bulletins;
 - c. Are knowledgeable in dealing with accidents/incidents and emergency response situations, and coordinating with others during the same.

Randomly select several controllers, operators, and maintenance personnel, and verify their compliance with applicable rules, that they have the proper safety equipment, that their radios are functioning, and that they are complying with the personal electronic device policy.

FINDINGS AND RECOMMENDATIONS

Activities:

1. Staff observed and interviewed Maintenance Technicians to verify compliance with appropriate PPE (high-visibility vests, safety shoes, safety glasses when using pneumatic tools, dust masks related, welder's hood when welding, and also verify knowledge and compliance with operating rules both in the maintenance shop and yard as well as on the mainline). Staff observed safety signage throughout the maintenance shop area (i.e. stairs had Caution sign to ensure workers confirm overhead power is de-energized, light indicators to indicate if there is power to catenaries, emergency eye wash station signs, fire extinguisher signs, eye, hearing respiratory required signs, STOP signs on rails). Staff then accompanied Maintenance Supervision to the Paint and Hazmat storage area. Proper PPE was being utilized in the Paint Shop (i.e. glasses, hearing protection, respirator, coveralls). At the Hazard Materials storage area, proper signage was displayed, full barrels were separate from empty barrels, empty barrels were in an area accessible for contractor to pick up and haul away.
2. Staff entered the Controller work stations to review procedures.
 - a. Each line has their own control log and each controller maintains their own control log. The control log will contain wayside activity (with 1 hour permits – if additional time is needed, the permit will be renewed for another hour and that additional time will be logged. Train departures are logged as well as application of emergency braking. Staff reviewed Track Warrants, daily orders, list of operators' workday, and authorizations.
 - b. Staff observed controllers performing duties in compliance to standard operating procedures, rule book and bulletins as per LR-SOP-12-200.
 - c. Staff reviewed accident/incident and emergency response procedures, paperwork and logs pertaining to an incident that had occurred the day before (June 3, 2014, at 10:30).
3. Staff randomly selected controllers, operators and maintenance personnel and verified they knowledge and compliance to applicable rules. The operators possessed the required safety equipment (set of train keys, working portable radio, current VTT, CA DMV Class B license, Medical cards, accident package, current timetable, operating bulletin, working watch set to OCC time, and proper uniform).
4. All observations verified compliance to General Order 172 and SRTD Personal Electronic Device Policy.

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	13-C	Element	Rules Compliance: Operator, Controller, and Maintenance Personnel Hours of Service
Date of Audit	June 4, 2014	Department(s)	Operations Department Safety Department
Auditors/ Inspectors	Debbie Dziadzio Mike Warren Daniel Kwok	Persons Contacted	Vern Barnhart Mike Cormiaie Laura Espinoza Shannon Hurley Rodney Hunter

REFERENCE CRITERIA

1. General Order 143-B, Rule 12.04 Hours of Service-Safety Sensitive Employees
2. General Order 164-D
3. SRTD Rail System Safety Program Plan (SSPP) dated January 2014

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Rules Compliance: Operator, Controller, and Maintenance Personnel Hours of Service

Select at least six employees at random from each of the following classifications:

- Train Operator
- Train Controller
- Track Maintenance
- Signals Maintenance
- Vehicle Maintenance
- Supervisor or Manager

Inspect the employees' time cards for a three-month period during the past 18 months to determine whether:

1. Shifts were in compliance with the requirements that safety-sensitive employees may not remain on duty for more than 12 consecutive hours, or for more than 12 hours in any 16 hour period.
2. Each initial on-duty status was preceded by eight consecutive hours of off-duty status.

FINDINGS AND RECOMMENDATIONS

Activities:

1. Staff reviewed (6) personnel records from Track, and Vehicle Maintenance Department and (6) from Signals Department. Personnel reviewed were supervisors, or technicians working 1st, 2nd, and 3rd shifts. Staff then reviewed (6) Operators and (6) Supervisors/Controllers. Staff's task was to inspect records for compliance to the Hours of Service Policy, which requires safety-sensitive employees to not remain on duty for more than 12 consecutive hours, or for more than 12 hours in any 16 hour period.
2. While reviewing the above records, staff confirmed on-duty status was preceded by (8) consecutive hours of off-duty status.

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	13-D	Element	Rules Compliance: Contractor Safety Program
Date of Audit	May 30, 2014	Department(s)	Operations Department Safety Department
Auditors/ Inspectors	Debbie Dziadzio	Persons Contacted	Rufus Francis, Director of Safety Rob Hoslett, Senior Safety Specialist

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Rules Compliance: Contractor Safety Program

Interview the SRTD representative responsible for the Contractor Safety Program and review SRTD's relevant program documentation to determine whether:

1. SRTD has developed and implemented a control document clearly establishing its responsibilities and requirements for the contractor safety program, including:
 - a. Training and certification for contractors and their employees.
 - b. The rules, regulations, and procedures applicable to contractors and their employees.
2. SRTD's procedures and practices clearly identify that SRTD is ultimately in charge of its system, and that contractors and their employees must comply with all established safety rules and procedures.
3. SRTD procedures require regular internal audits and inspections of construction sites to monitor compliance with its safety requirements.
4. SRTD procedures establish the range of activities for monitoring Contractors and their employees, and enforcing compliance with safety requirements through regular unscheduled and unannounced compliance checks, as well as by scheduled periodic audits and inspections.
5. SRTD's monitoring and enforcement activities are properly recorded, distributed, and filed. There is sufficient interagency coordination among various contractors regarding safety issues.

FINDINGS AND RECOMMENDATIONS

Activities:

1. Staff interviewed SRTD Safety Department and reviewed control documents that establish responsibilities and requirements for contractor safety programs. Staff also reviewed SSPP January 2014 Section 16.3 Contractor Safety and curriculum of On-Track-Safety class for Contractors that contains General Safety Requirements and compliance.
2. Staff reviewed SSPP January 2014 Section 16.3 Contractor Safety, Curriculum of On-Track-Safety program for Contractors, and handout titled Procedure for Contractors Work on the Right of Way.
3. Staff reviewed SSPP 2014 regarding contractors' compliance and questioned how construction sites on the right-of-way are monitored for compliance to operating rules and procedures.
4. Staff questions how the findings are recorded, distributed, and filed.
5. Staff was shown a log utilized by the Safety Department that tracks contractors (contractor information provided by contract signed between SRTD and Contractor). The log tracks when contractors are required to receive (and retake) On-Track Safety. On-Track Safety classes provide training in all rules and regulations applicable to working on SRTD right-of-way. Staff learned that the contract that is signed between SRTD and a Contractor stipulates that the Contractor will 'certify' their employees. There is always an SRTD Escort (wayside trained employee) that accompanies the contractor and their employees while the contractors perform work Wayside.
6. Staff found that all material clearly establishes SRTD is in charge of its system.
7. Staff reviewed an inspection checklist that is performed by all Road Supervisors. The supervisors also utilize the checklist for their own personnel working wayside. If non-compliance is observed, there is a review by SRTD Safety Staff who may determine that the individual is forbidden to be on SRTD property. If a serious violation of Federal and State regulations or SRTD operating rules and procedures is observed, an immediate determination will be made to remove the offender from SRTD property.
8. Safety Department advised that Wayside non-compliance is handled through their department. Staff reviewed checklists and how they were recorded.

Findings:

None

Comments:

1. The current procedure regarding On-Track-Safety for contractors only, and not their employees, seems to work. The use of an SRTD Escort is a safe alternative to 'certifying' all contractors and their employees who work Wayside. However, this practice may need to be looked at in the future with changes occurring.

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	13-E	Element	Rules Compliance: Operating Rules and Procedures Manual and Operations Bulletin Revisions
Date of Audit	June 5, 2014	Department(s)	Operations Department Safety Department
Auditors/ Inspectors	Debbie Dziadzio	Persons Contacted	Rufus Francis, Vern Barnhart, Rob Hoslett, Shannon Hurley

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014
3. SRTD Rulebook

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Rules Compliance: Operating Rules and Maintenance Procedures Manual and Operations Bulletin Revisions

Interview SRTD representative responsible for operations rules and procedures (OR&P) as well as review necessary documentation to determine whether:

1. Revisions to the OR&P are performed systematically and distributed to the relevant personnel.
2. Operating bulletins are issued in a timely manner and provided to train operators as necessary, with adequate information for responsible implementation.
3. Submitted unusual occurrence reports regarding operations are reviewed and approved by the personnel responsible, and addressed by the appropriate departments.
4. Any discrepancies in unusual occurrence reports and CAPs were mitigated in a timely manner and tracked until completion.
5. All new operating rules and bulletins were distributed to CPUC Staff during the past 12 months, and the rule/bulletin distribution process has been tracked.
6. Determine how many operating bulletins are issued each year and how SRTD Safety Department is involved in the review, approval and dissemination of these bulletins.
7. How long do operating bulletins typically stay in effect? Does the SRTD have a process in place to review operating bulletins to determine when they should be incorporated into the rulebook?

8. Does SRTD Safety Department conduct assessments to evaluate safety-related impacts to rules changes and bulletins?
9. Discuss the process used to review and update rules as well as to review and issue operating bulletins.
10. Interview SRTD Safety Department representatives to determine when rules and procedures were last reviewed (certain rules and procedures should be reviewed after accidents) and revised.
11. Conduct interviews with SRTD Safety Department representatives to discuss their role in ensuring that safety concerns are addressed in SRTD's rules compliance program.
12. Do Safety Department representatives support any rules compliance activities?
13. Do they receive reports from the SRTD's operations and maintenance departments regarding the performance of rules checks, assessments, and testing?
14. Are hazards identified from the rules compliance process and reported to SRTD Safety Department and managed through the hazard management process?

FINDINGS AND RECOMMENDATIONS

Activities:

1. Staff reviewed LR-SOP-12-102 regarding periodic review of departmental notices, bulletins, and standard operating procedures. A review occurs every year by the end of January and a complete rewrite occurs every three (3) years. Staff reviewed a draft (on computer) of the process for rule book revision. Rule book and Notices revisions will also occur anytime there is a significant change (i.e. opening another section of line, GO 175). A committee is formed to review rule book revisions which include notices, bulletins, and SOP's.
 - a. Committee consists of: member from Safety, Operations, Operators, Wayside Superintendent and staff, Linemen, Rail Maintenance, Trainer, LRV Maintenance Supervisor, and CPUC.
 - b. The committee members solicit comment
 - c. Review rule # by rule #.
 - d. Notices : review all notices, incorporate notice into rule book, if not incorporated into rule book, thorough discussion regarding notice.
 - e. Distribute to personnel. Each Rule Book is numbered and then the numbered rule book is signed for by SRTD personnel. SRTD maintains a log of the numbered rule books and the personnel who has them. All personnel must sign for updated versions for rule book or notices. This is controlled by the log for the numbered rule book.
2. Staff reviewed daily issued Bulletins which are numbered via a Julian date with revision (i.e. 6/5/2014 156-01). The bulletins are handed to the Operators when they initially go on-duty by the dispatcher in the Control Office. The bulletins will contain Special Instructions, Slow Orders, Track Warrants requiring Horn Audible, Rule of the Day.
3. Staff reviewed Controller Logs, which are kept by each controller, each day for whichever line they are controlling. Any unusual occurrence will appear on the Controller's Log. The

logs are forwarded to Risk, who has a computer system to track occurrences. Daily communication between the departments allows the various departments to be aware of an occurrence (i.e. hard to throw switch).

4. Refer to #3. The tracking is done using the controller logs. Risk Department will track CAPS until complete.
5. Staff asked to see the distribution list of all personnel who receive updates/revisions for SRTD rules book, bulletins, and notices. Staff did not see CPUC staff on the distribution list and asked if CPUC Staff was on the distribution list for revised rules and notices as per GO 164-D.
6. Staff reviewed Bulletins, which are issued daily, and reviewed the distribution list, which included Safety Department.
7. Operating Bulletins are issued daily. Notices are reviewed yearly (see item 1 on this list). Staff reviewed all of the Notices via SRTD Intranet and was advised that all SRTD personnel have access to the SRTD Intranet.
8. Staff asked SRTD Safety Personnel if Safety conducted assessments to evaluate the safety-related impacts to rules changes and bulletins. Staff was advised that observations via efficiency testing (Levels I, II, III) track and evaluate the impact to changes.
9. See items 1 and 7 on this list.
10. Staff reviewed the computer drafts for the yearly reviews that were completed in January (see item 1 on this list). Staff then reviewed SRTD's revisions for Wayside personnel in accordance to General Order 175 that was completed in February.
11. Staff asked what Safety's role was regarding rules compliance programs and was advised Safety Department is included in all committees regarding rules compliance programs.
12. Safety Department advised Staff that Safety Reps can be and are part of efficiency testing teams, operations observations, and On-Track Safety observations.
13. Staff asked Safety Department if they receive reports regarding operations and maintenance departments regarding performance, assessments, and testing. Safety replied that they do not receive a report directly to Safety Department but all performance, assessments, and testing results are included in the monthly HRSFLC (Hazard Resolution Safety Fire Life Committee), which Safety is an active participant of.
14. Staff was advised that known hazards are identified from the rules compliance process and identified thru the Hazard Management process (see item 13 on this list).

Findings:

1. CPUC Staff is not on the distribution list for all updated rules, bulletins, and notices.

Comments:

1. Safety Department does not receive reports from Operations or Maintenance departments regarding the performance of rules checks, assessments, and testing. The Safety Department should be receiving this information and evaluating it to determine whether training and compliance by employees is satisfactory.

Recommendations:

1. Include CPUC on distribution list for updates/revisions to operating rules, notices, SOP's as per GO 143-B, Section 13.02.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	14-A	Element	Facilities and Equipment Inspections: Wayside Equipment
Date of Audit	June 3, 2014	Department(s)	Wayside Maintenance Department
Auditors/ Inspectors	John Madriaga Kevin McDonald	Persons Contacted	Vern Barnhart Michael Cormia

REFERENCE CRITERIA

1. General Order 164-D.
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014
3. LR-SOP-87-413, ROW Track Maintenance & Inspection.

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Equipment Inspections: Wayside

Interview SRTD Wayside inspectors, and review appropriate records to determine whether:

1. Required inspections were performed.
2. Inspections were properly documented and noted, and discrepancies were corrected in a timely manner.
3. Potential hazards found during inspections were tracked from recommendation, Corrective Action Plans, and implementation.
4. Check a sampling of hazards identified during inspections to ensure they are immediately reported, documented, and tracked through resolution.
5. Check a sampling of "Corrective Action Plans" to determine timeliness of resolution and ensure follow-up activities are performed, hazard resolution has taken place, and a measure of the effectiveness of implemented hazard controls has taken place, documented and noted discrepancies were corrected in a timely manner.

FINDINGS AND RECOMMENDATIONS

Activities:

Visual inspections of the following actively used SRTD Wayside Equipment: Pettibone Speedswing # 196; Brandt Utility Truck # 181; SRTD Dump Truck # 543.

Examination of internal SRTD inspection records for the following actively used SRTD Wayside Equipment: Pettibone Speedswing # 196; Brandt Utility Truck # 181; SRTD Dump Truck #543;

Findings:

- 1.

- a) Pettibone Speedswing # 196: Front and rear hi-rail gear had no locking pins to safely secure hi-rail gear when utilized on the rail, or when stored in the up position for street travel. Also, this equipment had no pre-trip inspection sheet. This equipment had a fire extinguisher, but no date stamp tag for re-charging or expiration. SRTD internal inspection policy for this equipment is every 180 days. SRTD records show inspections on December 28, 2012, but then not again until December 2, 2013, and no current 180 day inspection for 2014 (two inspection reports missing for this time period).
- b) Brandt Utility Truck # 181: This equipment had a fire extinguisher, but no date stamp tag for re-charging or expiration. This equipment's left rear backup work light was non-functioning. SRTD internal inspection policy for this equipment is every 90 days. SRTD records show inspections on May 24, 2013, but then not again until November 23, 2013, and then not again until May 6, 2014 (two 90 day inspections missing for this time period).
- c) SRTD Dump Truck # 543: This equipment had a fire extinguisher, but no date stamp tag for re-charging or expiration. SRTD internal inspection policy for this equipment is every 90 days. SRTD records show inspections on August 15, 2013, and then not again until January 3, 2014, a period of 5 months.

Recommendations:

1. SRTD Should follow its inspection and maintenance requirements, and address the deficiencies identified below, on its non-revenue and maintenance vehicles.

- a) Pettibone Speedswing # 196: Install necessary hi-rail gear locking pins, front and rear. Keep a daily pre-trip inspection sheet in the equipment cab. Install date stamp for all fire extinguishers. Follow SRTD's own internal inspection policy of 180 days for this equipment.
- b) Brandt Utility Truck # 181: Install date stamps for all fire extinguishers. Repair non-functioning left rear backup work light. Follow SRTD's own internal inspection policy of 90 days for this equipment.
- c) SRTD Dump Truck #543: Install date stamps for all fire extinguishers. Follow SRTD's own internal inspection policy of 90 days for this equipment.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	14-B	Element	Facilities and Equipment Inspections: Stations and Emergency Equipment
Date of Audit	June 3, 2014	Department(s)	Facilities Department
Auditors/ Inspectors	Mike Borer Jason Dixon	Persons Contacted	Lynn Cain Joe Lentz

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Facilities and Equipment Inspections: Stations and Emergency Equipment

Interview SRTD facilities inspectors and review appropriate records to determine whether:

1. Required inspections were performed.
2. Inspections were properly documented and noted discrepancies were corrected in a timely manner.
3. Potential hazards found during inspections were tracked from recommendation, Corrective Action Plans, and implementation.

FINDINGS AND RECOMMENDATIONS

Activities:

CPUC Staff met with SRTD Personnel to conduct audit of requested documentation as it relates to Checklist #14-B. CPUC Staff requested records of inspections that were performed by SRTD Personnel from 2010-2013.

Findings:

1. SRTD does not employ Inspectors to conduct required inspection. SRTD relies on LRV Operator complaints and Station Guards to report defects.
2. SRTD Fails to conduct Quarterly Inspection as required.
3. Repair Orders are incomplete. Documents provided by SRTD failed to show location and repairs performed.
4. Document shows section of fence missing at Substation 6 but could not generate record of repair at time of request.
5. Spreadsheet titled "Sacramento Regional Transit Weekly Station Evaluation" fails to show

date of inspection and is currently being used by SRTD Facilities Personnel as means of off-site inspections.

6. SRTD Facility Personnel currently use (2) two forms of tracking for station evaluations that are not consistent. Information is not shared between lists or dated and tracked to completion of repairs.

Recommendations:

1. SRTD should develop a program with the controls necessary to make certain, all required station facilities and emergency equipment inspections are conducted and documented as required.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	14-C	Element	Facilities and Equipment Inspections: Bridges and Aerial Structures
Date of Audit	May 30, 2014	Department(s)	Engineering Department
Auditors/ Inspectors	Robert Hansen Jimmy Xia	Persons Contacted	Darryl Abansado, Director of Civil and Track Design

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014
3. CT-SOP-08-001, Bridge/Structure Inspections & Reports

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Facilities and Equipment Inspections: Bridges, and Aerial Structures

Interview SRTD representatives and review appropriate records to determine whether:

1. Structures inspections were performed.
2. Inspections were properly documented and noted, and discrepancies were corrected in a timely manner.
3. Potential hazards found during inspections were tracked from recommendation, Corrective Action Plans, and implementation.
4. The Hazard Resolution Committee is aware of any safety hazards pertaining to civil structures.

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed the Director of Civil and Track Design (Director) and reviewed records of SRTD's structures inspections. SRTD appears to be in compliance with its SSPP and inspection procedures.

1. According to SRTD's procedures, bridges and structures are inspected biennially (once every two years). CT-SOP-08-001 requires that the inspections be performed by a Registered Structural or Civil Engineer. The inspectors report to the Director of Structures and the Superintendent for Light Rail
2. Each inspection is recorded on a checklist listing any defects found, which are then organized in a spreadsheet. Each defect is assigned a priority level, described in part 3 below, and corrected as necessary.
3. The Director maintains a spreadsheet of corrective actions resulting from the biennial

inspections. Each action receives a row number, identifies the location of the repair, and a priority rating from 1 to 4:

1. Complete action within 90 days
2. Complete action within 6 months
3. Complete action within 12 months
4. Monitor

Items which have been corrected receive a completion date and are typically removed from the spreadsheet. The corrective actions are not uniquely numbered, and the row numbers change as items are added and removed from the spreadsheet.

SRTD shares some bridge structures with CalTrans. The Director informed Staff that any defects found on shared structures are reported to CalTrans and handled by the responsible party.

4. Staff reviewed the meeting minutes from three occurrences of the monthly HRFLSC meetings:
 - a. April 26, 2013,
 - b. June 21, 2013, and
 - c. August 16, 2013.

The upcoming biennial inspection was an item of discussion for the April meeting, and the completion of the inspections was discussed in the August meeting. A complaint regarding the cracks on the Power Inn Bridge was discussed in the June meeting. According to the Director, the complaint was investigated through an extra bridge inspection, and the cracks were determined to pose no safety hazard. A CPUC representative was present at each of the three meetings reviewed.

Staff randomly selected the following bridges and structures, and reviewed the inspection reports and corrective actions for each for the past 3 years, including biennial inspections in 2011 and 2013:

American River Viaduct

- August 16, 2011
 - Defective corrosion protection and grounding of fences of structures
 - Cracks on top of the Overhead Catenary System (OCS) support column, possibly due to poor cold joint construction
 - Debris under abutment
 - Minor transverse cracks on roadway
- June 4, 2013
 - Same condition as in 2011
 - The OCS supports had not been repaired.
 - Minor transverse crack had been fixed within 90 days, but broke before 2013 inspection, SRTD is considering alternative materials for repair

Brighton Bridge over Union Pacific Railroad (inbound tracks only)

- August 10, 2011
 - The Systems Department should confirm cathodic protection
 - Cleaning issues—completed twice
 - Longitudinal crack in track slab at MP 0.35, monitor and repair
 - Fence baseplates need grout at curb (repaired November 2010, February 2011, and March 2011)
 - Lock is missing on door of cathodic protection box
- May 22, 2013
 - Cleaning issues
 - Curb concrete—was repaired
 - Cathodic protection box door needs a pad lock
 - Longitudinal crack in track slab at MP 0.35—was not corrected, did not appear on tracking spreadsheet

Florin Road Grade Separation

- August 11, 2011
 - Broken lights
 - Hairline cracks at bolt clips
 - Cathodic protection to be inspected
- June 5, 2013
 - Hairline cracks at bolt clips
 - Corrosion inspection is done by stray current monitoring

Grand Avenue Bridge

- August 17, 2011
 - Open joints need expansion material
 - Clean-out grade drain
 - Non-structural defects were documented, visible defects were photographed as required
- May 29, 2013
 - Same condition as in 2011
 - Both items were likely corrected in 2011 and arose again

Sunrise Boulevard Separation Bridge

- August 9, 2011
 - A wall on the southwest side is leaning but appears stable, was surveyed on May 20, 2008
 - Survey of wall is Priority 1, requiring action within 90 days—no action was taken, and the priority level is deemed inappropriate for the defect, should be Priority 4
- May 21, 2013
 - Cracks at abutment #1 are stable
 - Inspection holes for corrosion monitoring wire were not dry-packed

- No evidence of corrosion
- Small cracks at south edge near STA 828+00
- No photos of the cracks as required by CT-SOP-08-001

Watt Avenue Grade Separation Bridge

- August 16, 2011
 - Numerous hairline cracks
 - Rail ties are pumping water through ballast—defect not tracked in spreadsheet
 - Missing door on corrosion monitoring box—defect apparently fixed but not properly documented
- June 4, 2013
 - Numerous hairline cracks on track slab and girders
 - Ties at east abutment are pumping water through ballast
 - Multiple cleaning issues
 - Corrosion protection to be inspected before next biennial inspection—Staff reviewed the follow-up report by contractor LTK from November, 2012

Findings:

1. No follow-up action was taken in response to the leaning wall at the Sunrise Boulevard Separation Bridge, which was given a Priority 1 status, requiring action within 90 days.
2. Cracked concrete joint on the Overhead Catenary System support posts were not addressed in a timely manner.

Comments:

1. SRTD's Director of Civil and Track Design followed-up with staff to confirm that the Wayside Maintenance department is continuing to monitor the longitudinal crack noted at MP 0.35 on the Brighton Bridge over Union Pacific Railroad. SRTD will add the defect to the tracking form at Priority 4.

Recommendations:

1. SRTD should ensure that defects found during routine and auxiliary inspections are assigned appropriate priority ratings, and that follow-up action is taken accordingly.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	14-D	Element	Facilities and Equipment Inspections: GO 95 Right-of-Way Compliance
Date of Audit	June 2, 2014	Department(s)	Wayside Maintenance Department
Auditors/ Inspectors	Steve Espinal	Persons Contacted	Chistopher Olivas
REFERENCE CRITERIA			
<ol style="list-style-type: none"> 1. General Order 95 2. General Order 164-D 3. SRTD System Safety Program Plan (SSPP) dated January 2014 			
ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION			
<p>Facilities and Equipment Inspections: GO 95 Right-of-Way Compliance</p> <p>Select at least four (4) of mainline or yard track sections at random from each of the following areas:</p> <ol style="list-style-type: none"> 1. North Line 2. South Line 3. Folsom Line <p>To determine:</p> <ol style="list-style-type: none"> a. The required monthly and annual inspections were performed during the past 12 months as required by the referenced procedure. b. The inspections were properly documented and noted discrepancies were corrected in a timely manner. <p>Interview SRTD Wayside inspectors, review appropriate records, and perform visual inspections and measurements to determine whether:</p> <ol style="list-style-type: none"> 1. Right-of-Way inspection and maintenance standards and programs are compliant with General Order 95. 2. Inspections were properly documented and discrepancies were corrected in a timely manner. 3. Potential hazards found during inspections were tracked from recommendation, Corrective Action Plans, and implementation. 4. All right-of-way components are in compliance with the applicable reference criteria, or variances were submitted properly and approved by CPUC. 			

FINDINGS AND RECOMMENDATIONS

Activities:

Conducted inspections on the following substation N4, N3, S3, F15, S5 and F3. Also reviewed SRTD quarterly inspections of the Overhead Catenary Systems (OCS). Inspected substation batteries, protective relays status, annunciators, rectifier diodes, transformer winding temperature, HVAC, eyewash, fire extinguishers, emergency lighting, doors/locks, log books and general state of cleanliness.

Findings:

1. Some substations lacked fire extinguishers and the substations with fire extinguishers are not routinely inspected.
2. Substation F15 on the Folsom Line emergency lighting is out of service. Substation S3 one set of emergency lighting of the two are out of service.

Comments:

1. All substations were very clean and free of dust. The log books were properly filled out. The biweekly, quarterly and quadrennial inspections are all conducted in a timely manner. For all the substations inspected the batteries, eye wash, protective relays, annunciators, doors/locks, rectifier diodes and transformer winding temperatures were functioning properly.
2. Because 2 of the 6 stations had emergency lighting issues identified, staff is recommending specific attention to this item in upcoming inspections or a special inspection to confirm functionality in all stations.

Recommendations:

1. Inspect all substations and provide properly functioning and inspected fire extinguishers.
2. Repair emergency lighting at substation F15 and S3 emergency lighting. Conduct an inspection of all the emergency lighting throughout all the substations and repair any additional lighting which is out of service.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	14-E	Element	Facilities and Equipment Inspections: Signal System and Vital Relay Maintenance
Date of Audit	June 5-6, 2014	Department(s)	Wayside Maintenance Department
Auditors/ Inspectors	Ronnie Cremeans	Persons Contacted	Michael Cormiae, Wayside Superintendent Jarrod Burklow, Wayside Maintenance Supervisor

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD System Safety Program Plan (SSPP) dated January, 2014
3. LR-SOP-91-422 Vital Relay Testing

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Facilities and Equipment Inspections: Signal System and Vital Relay Maintenance

Interview SRTD's representative responsible for Wayside Maintenance, and randomly select four vital relay Preventative Maintenance (PM) records from the past 12 months and determine whether:

1. Signal Systems and Power Switch Maintenance Program:
 - a. A standard operating procedure or other directive describing SRTD's PM program for interlocking plants is current, has been approved, and is being implemented.
 - b. All required PM activities were documented on standardized inspection report forms.
 - c. Defects and non-compliances noted on inspection report forms were tracked from recommendation, Corrective Action Plan, and implementation.

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed SRTD personnel and selected the following records of preventive maintenance (PM) for scheduled and unscheduled maintenance of vital relays that were completed in the last three years.

1. Green Line:
Evergreen Road 083-4.08
2. Blue Line:
26th Street 83N-136.0

3. Gold Line

Sunrise Interlocking R.S.F. F14.50

Findings:

Comments:

1. For the Evergreen Rd. crossing, condition left after repairs made was not recorded on prescribed highway grade test record inspection form. Any repairs made to crossing warning system must be recorded/explained as such on the prescribed test record inspection form.

Recommendations:

1. none

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	14-F	Element	Equipment Maintenance Program: Measurement and Testing Instrumentation
Date of Audit	June 3, 2014	Department(s)	Maintenance Department
Auditors/ Inspectors	Mike Borer Jason Dixon	Persons Contacted	Laura Espinoza Reggie Silva
REFERENCE CRITERIA			
<ol style="list-style-type: none"> 1. General Order 164-D 2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014 3. LR-SOP-01-224, Equipment Calibration 			
ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION			
<p>Facilities and Equipment Inspections: Measurement and Testing Instrumentation</p> <p>Interview responsible SRTD representatives from each department, review appropriate records, inspect equipment storage facilities, and inspect no fewer than eight measuring or testing instruments to determine whether:</p> <ol style="list-style-type: none"> 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 instrument. 3. Tools and instruments requiring calibration are addressed in an appropriate procedure(s) 			
FINDINGS AND RECOMMENDATIONS			
<p><u>Activities:</u></p> <p>CPUC Staff met with SRTD Personnel to conduct audit of requested documentation as it relates to Checklist #14-F. CPUC Staff requested records of calibration that were performed from 2010-2013.</p> <p>SRTD Personnel provided CPUC Staff with the following records;</p> <ol style="list-style-type: none"> 1. LR-SOP-01-224 Equipment Calibration SOP 2. Calibration Certificates dated June 4, 2013 3. List of 329 Tools and Testing equipment required for LRV Service and Repair. 			

Findings:

1. Documents supplied by SRTD Personnel indicate all 329 pieces of equipment that are used to ensure required daily inspection and repair of LRV's are out of date. Individual items are tagged with identification stickers that show tool ID # and date of calibration. Individual tool inspections on over 10% of items confirmed tools are being used that exceed LR-SOP-01-224 requirements of yearly calibration. SRTD could not indicate when tools will be brought into compliance with SOP requirement. LRV Maintenance staff indicated procurement issues prevent the required calibrations from being performed in a timely manner . Tools that are used for tire measurement and torque confirmation are among tools beyond calibration requirement as of June 4, 2014.

Comments:

None

Recommendations:

1. SRTD should plan to prevent the necessity of using delinquent repair and inspection equipment by developing a testing/calibration schedule for such equipment. SRTD must procure the calibration and testing equipment it needs to perform the required inspections or otherwise acquire those services in a timely manner.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	15-A	Element	Maintenance Audits and Inspections: Rail Vehicles
Date of Audit	May 29, 2014	Department(s)	LRV Maintenance Department
Auditors/ Inspectors	Jason Dixon Mike Borer	Persons Contacted	Mike Borer Jason Dixon Laura Espinoza Vern Barnhart Brian Dunn Robert Hoslett

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD System Safety Program Plan (SSPP) dated January 2014
3. LR-SOP-06-300, LRV Mileage Based Inspections.

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

**Maintenance Audits and Inspections:
Rail Vehicles**

1. Perform detailed inspections of SRTD's revenue and non-revenue rail vehicles to determine if the following components are properly and adequately maintained:
 - a. Axle-mounted gearbox
 - b. Truck, axle, and wheel assemblies
 - c. Brake systems
 - d. Door assemblies
 - e. Lighting
 - f. Passenger doors
 - g. Passenger component and safety appliances
 - h. Public address and intercom systems
2. Determine whether the cars are in compliance with the applicable references based on record review and inspections.
3. Verify that the SSPP provides a description of the SRTD's maintenance audits and inspection program, including identification of the affected facilities and equipment audited/inspected, maintenance cycles, and required documentation.
4. Randomly select three (3) audited system elements and review the maintenance records for those elements for the past year. Check to see that:
 - a. The preventive maintenance (PM) performed was consistent with the transit agency's

- maintenance program;
- b. The PMs were conducted on schedule;
 - c. The proper type of PM was conducted according to the maintenance cycles promulgated in the maintenance program.
5. Randomly select three (3) audited system elements and check failure history and hazard tracking log for the previous three years. Note if a correlation between the PM maintenance cycle and corrective action/hazard reports exist to ascertain possible PM procedural deficiencies.
 6. Review corrective action and failure records for three (3) audited systems and note repetitive failures that might indicate mechanic error and/or training requirement, ineffective procedure, and/or material deficiencies.
 7. Verify all documentation has dates, approvals, and control numbers.
 - a. Verify that documentation is available for all identified maintenance elements.
 - b. Verify that the documentation is current, consistent with each other, readily available to end users, and written and illustrated for the intended users.
 8. Review records responsible for maintenance and inspection.
 - a. Review past documentation to verify that safety concerns and hazards identified from maintenance audits and inspections are being fed into the SRTD's hazard management process.
 - b. Review random sampling of three (3) system elements and ensure that the appropriate checklists, i.e. ("*Inspection Card*") include item inspected, type inspection performed, date of inspection, mechanic performing inspection, responsible supervisor, supervisor and mechanic approval signature, that all items associated with the type inspection have been properly inspected, and that deficient items have been properly documented and/or repaired.
 9. Interview representatives from the Safety Department to determine:
 - a. How they coordinate with the SRTD's maintenance functions to ensure that inspections and audits are being performed as required for safety-critical systems, such as track, structures, train control, and transit vehicles.
 - b. How they receive assurances that these safety-critical systems are inspected/tested and/or serviced on a scheduled, periodic basis.
 - c. How they receive assurances that, if an inspection were to indicate that a safety-critical system failed or was found to be in an out of tolerance condition, operations would be restricted to maintain safety until such time as an appropriate remedial action has been completed.
 - d. Any independent inspections/audits performed by Safety Department representatives.
 - e. Randomly interview maintenance personnel, including both supervisors and mechanics, to verify that they have available the most current maintenance procedures and that they understand and have been properly instructed on using the information.
 - f. Ask these personnel if they have access to the testing and measurement equipment or devices that may be specified by inspection and testing procedures.

- g. Ask these personnel if they know of any immediate safety concerns or hazards that are the result of poor maintenance activities.
 - h. Interview maintenance supervisors to verify how they communicate these issues to the SRTD's Safety Department and other departments.
 - i. Note if their responses are consistent with what is stated in the SSPP and referenced/supporting procedures.
10. At random and field review a sampling of the most recent completed preventive maintenance reports (PMs), and, through visual inspection, ascertain, to the extent possible, whether the required maintenance procedure was completed.
- a. This is best done by using the "Preventive Maintenance Checklist" with each item on the list correlated with a specific procedure. Note any areas from the checklist that simply say "checked," "tightened," or "tested" without specific readings. These items should be noted as deficiencies if specific readings are supposed to be noted in the maintenance documentation.
 - b. Select and inspect at least two (2) vehicles from each of the SRTD's vehicle fleets to determine if SRTD is maintaining its vehicles properly and adequately.

FINDINGS AND RECOMMENDATIONS

Activities:

CPUC Staff conducted initial meeting with SRTD Personnel and reviewed contents of Checklist 15-A, and requested records that pertain to components contained within.

CPUC Staff conducted physical mechanical inspections on the following LRV Units:

- #136
- #110
- #123
- #205
- #203
- #132
- #119

(Findings noted on these LRV's will be noted in the FINDINGS below).

CPUC Staff conducted random Preventative Maintenance Records inspection to confirm that SRTD Personnel were adhering to SOP, SSPP, and General Order 143-B requirements.

CPUC Staff reviewed Open Work Orders that pertain to specific LRV's. These contain parts or services that have not been completed as required by SOPs, SSPP, and General Order 143-B.

CPUC Staff reviewed current "Internal Annual Rail System Safety Audit Report 2013" that was supplied by SRTD System Safety Personnel. This audit is conducted annually to conform to State and Federal requirements.

Findings:

1. The following findings were reported to SRTD Personnel that accompanied inspection. LRV's selected were supplied by SRTD Personnel as available vehicles that were either in process of inspection or pulled from service to accommodate CPUC request for inspection.

Unit #136:

1. "A" truck safety bar loose.
2. Passenger grab straps have protective covering delaminated exposing pinch point.

Unit #110:

1. "B" truck fender loose.
2. "B" truck safety bar loose.
3. "C" truck safety bar loose.
4. "A" R&L track cable retaining cables loose.

Unit #123:

1. "B" truck safety bar loose.
2. Inverter cooling duct is repaired with duct tape.
3. Axle #4 tire missing shunt due to impact with fender.
4. "A" track brake cables loose.
5. "B" track brake cables loose.

Unit #205:

1. Fire extinguishers at both controlling cabs are out of date.

Unit #203:

1. "B1" door sensitive edge not responding to obstruction when door is closed.
2. "B1" door safety intrusion devices not responding to movement when door is closing.
3. "A" truck caliper bellows are deteriorated allowing unprotected movement of brake components.
4. #1 axle gear box leaking (well defined) oil.

Unit #132:

1. "A" track brake retaining cables loose.
2. "A" truck safety bar loose.
3. "C" truck safety bar loose.
4. "B" track brake retaining cables loose

Unit #119

1. "A" R side coupler oscillation stop broken.
2. CPUC Staff reviewed current "Internal Annual Rail System Safety Audit Report 2013"

that was supplied by SRTD System Safety Personnel. This audit is conducted annually to conform to State and Federal requirements. Page 5 & 6 contain recommendations and findings. Page 9 contains Checklist No. 2 which encompasses Maintenance Audits and Inspection Processes. On April 28, 2014, CPUC Staff conducted a Mechanical Inspection of LRV's and SRTD Metro Facility and found fire extinguishers located in Operating Cabs and within Maintenance Areas that were well beyond expiration of service. SRTD Personnel indicated procurement of contract was the reason all LRV's were being used for public revenue service with expired fire extinguishers. SRTD Internal Annual Rail System Safety Audit Report 2013 made no mention of finding in its report, even though the fire extinguishers expire dates were within the following month.

Comments:

1. The following details the "Open Work Order" procedures in place. Unit #203 was found to have a defective gear box and previous work orders were requested to determine duration of failure. Open Work Orders indicated gear box failure was first indicated 04/29/2011 at 420029 miles. Current mileage at time of inspection is 600470 miles which indicates LRV has been in service for 180441 miles and received at +/- 18 inspections without repairs being performed.
2. SRTD should adhere to requirements of SSPP, all maintenance SOP's, and General Order 143B requirements for conducting maintenance and repairs as required. All findings during checklist audit were conveyed and discussed at conclusion of inspection.

Recommendations:

1. SRTD should address and repair all the items identified in checklist #15-A, and develop the controls necessary to ensure adherence to LRV preventive maintenance requirements, LRV Mileage Based Inspections LR-SOP-06-300.
2. Fire extinguishers throughout the agency's vehicles and facilities must be inspected and serviced in accordance with the testing and inspection protocols and before the expiration date tagged on the unit.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	15-B	Element	Maintenance Audits and Inspections: Traction Power System
Date of Audit	May 30, 2014	Department(s)	Wayside Maintenance Department
Auditors/ Inspectors	Steve Espinal	Persons Contacted	Chris Olivas

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD System Safety Program Plan (SSPP) dated January 2014
3. LR-SOP-86-405

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

**Maintenance Audits and Inspections:
Traction Power System**

Select at least one section of rail traction power system from each of the following areas:

1. North Line
2. South Line
3. Folsom Line

For each section, review the appropriate documentation to determine whether:

1. The rail traction power system is inspected and maintained in compliance with applicable standards.
2. Substations and are inspected and maintained in compliance with applicable standards.

Perform a visual inspection of one substation for each of the three areas to determine whether they are in compliance with SRTD standards, and are in a state of good repair. Perform a detailed inspection of substation components.

Review SRTD's stray current program to determine whether:

1. SRTD is active in mitigating the effects of stray current on its own and surrounding structures.
2. SRTD has procedures in place to identify and correct hazards caused by stray current. Any hazards identified have been addressed and tracked through Corrective Action Plans to completion.

FINDINGS AND RECOMMENDATIONS

Activities:

Reviewed biweekly, quarterly, yearly and quadrennial substation inspection records. Substation documentation reviewed included: Folsom 3B, F200, S200, S7, S1, 16th & 12th Streets Sub 7, Sub 9, 6, 17 and 12 for years 2011, 2012, 2013 and 2014. Reviewed Overhead Catenary System quarterly inspections for 2011, 2012, 2013 and 2014. Discussed yearly emergency drills with traction power management. Reviewed annual high voltage training records.

Findings:

1. The Folsom OCS system was only inspected May 30, 2014, for the inbound directions for 2014. The outbound Folsom line OCS has not been inspected in 2014. According to the SRTD tractions maintenance standards the OCS system shall be inspected quarterly.

Comments:

1. American Public Transportation Association (APTA) Volume 5 – Fixed Structures APTA RT-S-FS-004-03 repeatedly states “Perform thermal survey” regarding AC vacuum breakers, AC switches, transformers and negative return switches.
2. SRTD does conduct high voltage training with staff. The training is documented by name and actual work conducted is documented by worker number identification. Please include worker identification number on the training records in order to cross reference work done to training records in order to improve the audit process.
3. SRTD staff upon interview stated they have contacted local utility companies regarding possible SRTD Direct Current (DC) stray current which may be interfering with utility underground infrastructure. SRTD staff stated the response from the utilities was limited and incomplete.
4. An OCS conductor thickness should be documented and trending should be conducted. Trending as help in predictive maintenance of the conductor and prevent breaks.
5. A communication line is close to if not resting on SRTD OCS system. SRTD should contact the communication provide to correct the matter.
6. During documentation review the 10 year thermal scan test folder was empty and there are no indications that thermal imaging of the system was conducted. Staff recommends SRTD conduct the thermal imaging inspection.

Recommendations:

1. Conduct OCS inspections on a quarterly basis dictated by SRTD procedures.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	15-C	Element	Maintenance Audits and Inspections: Signals
Date of Audit	June 5-6, 2014	Department(s)	Wayside Maintenance Department
Auditors/ Inspectors	Ronnie Cremeans	Persons Contacted	Michael Cormiae, Wayside Maintenance Superintendent Jarrod Burklow, Wayside Maintenance Supervisor

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD System Safety Program Plan (SSPP) dated January 2014
3. Code of Federal Regulations CFR 234-Grade Crossing Signal System Safety
4. GO 75-D
5. LR-SOP-86-408
6. LR-SOP-91-422

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Maintenance Audits and Inspections: Signals

Perform detailed inspections of the signal system components to determine whether or not they are in compliance with applicable reference criteria. Select at least one track section at random from each of the following areas to inspect, including at least one at-grade section, one and one aerial section:

1. Blue Line
2. Gold Line
3. Green Line

FINDINGS AND RECOMMENDATIONS

Activities:

Activities: Staff inspected and observed SRTD field operation, maintenance, and testing activities on the following locations:

Staff inspected Highway Grade Crossing, 2 and 4 year relay, and 10 year insulation megger test records from past three years.

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	15-D	Element	Maintenance Audits and Inspections: Tracks and Turnouts
Date of Audit	May 28, 2014	Department(s)	Wayside Maintenance Department
Auditors/ Inspectors	Kevin McDonald John Madriaga	Persons Contacted	Vern Barnhart, Michael Cormia

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD System Safety Program Plan (SSPP) dated January 2014
3. LR-SOP-87-413, ROW Track Maintenance & Inspection.

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Maintenance Audits and Inspections: Tracks and Turnouts

Review SRTD's records of preventative maintenance, schedule and unscheduled maintenance activities for two separate 6 month periods in the past 3 years:

1. Track Inspection:
 - a. Randomly select at least two separate track inspection areas to determine whether:
 - i. Mainline and tracks were inspected at the proper frequency.
 - ii. Inspections were properly documented and noted defects were corrected in a timely manner and tracked until completion.
 - b. Randomly select at least two separate recorded geometry car inspection reports to determine whether:
 - i. Mainline and tracks were inspected at the proper frequency.
 - ii. Inspections were properly documented and noted defects were corrected in a timely manner and tracked until completion.
 - c. Review SRTD internal rail defect reports to determine whether:
 - i. Mainline and yard tracks were inspected at the proper frequency.
 - ii. Inspections were properly documented and noted defects were corrected in a timely manner and tracked until completion.
 - iii. Verify that documentation is available for all identified maintenance elements.
 - iv. Verify that the documentation is current, consistent with each other, readily available to end users, and written and illustrated for the intended users.
2. Turnout Inspection:
 - a. Randomly select at least two separate turnout inspection areas to determine whether:
 - i. Mainline and yard tracks were inspected at the proper frequency.

- ii. Inspections were properly documented and noted defects were corrected in a timely manner and tracked until completion.
- 3. Review SRTD rail defect reports during the last three (3) years to determine if:
 - a. All mainline tracks were inspected as required by a device capable of detecting internal flaws in the running rails.
 - b. The required inspections were properly documented and noted defects were corrected in a timely manner.
- 4. Review SRTD track inspection reports for at least three (3) separate month-long periods during the last three (3) years to determine if:
 - a. All mainline and yard turnouts were inspected as required by on-foot inspection.
 - b. The required inspections were properly documented and noted defects were corrected in a timely manner.
- 5. Perform detailed visual and dimensional inspections/measurements of sample sections of mainline track, switches, crossovers, and turnouts to determine if the selected components are in compliance with the SRTD's track standards.
- 6. At random, select several basic track maintenance procedures (2 or 3) and observe performance of track maintenance activities to verify that procedures are being followed.

FINDINGS AND RECOMMENDATIONS

Activities:

- 1a. Records of track inspection of from January to July of 2011 and from July to December of 2011 from Fruitridge Station to City College station
- 1b. Geometry car inspection reports from 2012 and 2013.
- 1c. Internal rail defect reports from 2012, 2013 and 2014
- 2 Turnout inspection reports from January 2011 and July 2011 from Meadowview station to Florin station and 47th avenue station to Fruitridge station.
- 3 Same as 1.c.
- 4 Mainline and Yard Track inspection reports from June 2012 to July 2012, December 2012 to January 2013 and January 2014 to February 2014.
- 5 Walking track inspection by CPUC staff of tangent track, turnouts, crossovers and ROW on the Blue Line South between Meadowview Station and "X" St.
- 6 Observation of track maintenance crew on the Blue Line South between Broadway and 4th Avenue

Findings:

- 1. SRTD has no formal policy for Geometry Car inspections. Per SRTD's Wayside Maintenance Supervisor, SRTD has an "informal" policy of using a Stanley "push" type of geometry *calibrator* annually. Those inspections have been properly documented. However, the Stanley machine was characterized as "unreliable".
- 2. Switch 225 A has a loose jam nut and insecure connecting rod. Missing cotter pin near # 1

switch rod at switch 215 A.

Comments:

1. CPUC staff recommends that SRTD establish a policy, and make arrangements to purchase a reliable geometry car or hire a contractor to use an industry standard track Geometry Car for **annual** track inspections. SRTD has performed the geometry car inspections in the past, however there is no SRTD requirement in its SSPP or other procedures requiring it. Use of track geometry cars is an industry standard practice, and SRTD should include them as a component of their track safety standards. The absence of an internal requirement may result in the inspections not being done.

Recommendations:

3. Tighten and secure jam nut and connecting rod at switch 225 A. Install missing cotter pin near # 1 switch rod at switch 215 A.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	15-E	Element	Training and Certification Programs: Operators, Controllers, and Supervisors
Date of Audit	June 2, 2014	Department(s)	Operations Department
Auditors/ Inspectors	Debbie Dziadzio Daniel Kwok Michael Warren	Persons Contacted	Vern Barnhart Shannon Hurley Rodney Hunter Fred Diringer
REFERENCE CRITERIA			
<ol style="list-style-type: none"> 1. General Order 164-D 2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014 3. LR-SOP-12-200, LR Supervisor-Controller Certification Program. 4. LR-SOP-99-030, Operator Training lesson Plan. 			
ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION			
<p>Training and Certification Programs: Operators, Controllers, and Supervisors</p> <p>Interview SRTD representative(s) responsible for operations personnel training, certification, and recertification programs, and review appropriate records to determine whether:</p> <ol style="list-style-type: none"> 1. Employees have completed the initial training program, refresher, and remedial training as necessary. 2. Employees have been certified, and recertified at the required frequency, and currently meet all criteria for proper performance of his or her duties. <p>Select at least three (3) employees at random in each of the following classifications:</p> <ul style="list-style-type: none"> • Train Operator • Rail Supervisor <p>Review training, certification, and recertification records of the selected employees to determine whether:</p> <ol style="list-style-type: none"> 1. All personnel successfully completed initial training programs, and any discrepancies were addressed and resolved. 2. All personnel have been retrained and recertified at the correct frequency and are currently certified to perform their duties. 3. Verify that, in the SSPP and referenced or supporting procedures, the SRTD has established a 			

program to ensure that employees are qualified to perform their job duties in compliance with established rules and procedures.

4. Through a records review:
 - a. Verify that a process for maintaining and accessing employee training records is in place.
 - b. Verify that categories of safety-related work requiring training and certification have been identified.
 - c. Verify that employee and contractor job classifications requiring initial and refresher training and certification have been identified.
 - d. Verify that SRTD has process is in place to assess compliance with its training and certification requirements.
 - e. Verify that corrective actions taken to discipline employees and contractors for failure to follow established procedures once trained and certified are established and consistent.
5. Review training programs to verify:
 - a. That training records are maintained in both hard copy and soft copy formats.
 - b. That training consists of both classroom and hands-on training.
 - c. Verify that contractor training requirements are specified in contract documents.
 - d. Review documents and verify that requirements are being met.
6. Review training and recertification records for the above employees for the past three (3) years to determine if:
 - a. The employee has completed the initial training program and refresher and remedial training as necessary.
 - b. The course content was appropriate and adequate to meet training and recertification requirements.
 - c. The employee has been recertified at the correct frequency and currently meets the criteria to operate a vehicle or perform maintenance work.
7. Conduct interviews with representatives from the Safety Department to:
 - a. Assess the role of safety in supporting and evaluating the SRTD's training needs and programs.
 - b. Verify that training programs are reviewed and revised as necessary to ensure accuracy and relevance to current operations and maintenance.

FINDINGS AND RECOMMENDATIONS

Activities:

1. Staff interviewed SRTD Operations Personnel regarding training, certification, and recertification and was advised that the training program for new hires is (7) weeks which include (1) week in a classroom environment going over and learning operating rules and procedures including signal aspects, (1) week with the trainer operating LRVs in the yard, troubleshooting performance, (4) weeks operating on the mainline with the trainer or supervisor always present, and (1) week with a mentor Operator. The recertification program for operators and supervisor-controllers is an annual 2 day class.

Staff reviewed 14 operators in either the new training program, or the recertification program (SRTD currently has 70 operators). Of the 20% of operator records reviewed, 100% were in compliance to SRTD's LR-SOP-99-000, Operators Training Lesson Program.

Staff reviewed 3 Supervisors/Controllers and found 100% compliance to their programs as outlined in LR-SOP-12-200, LR Supervisor-Controller Certification Program.

2. Staff reviewed (3) operator records from the Operators Training Lesson Program to verify testing criteria to measure proper performance to his/her duties. Staff then reviewed (3) operator and (3) supervisor-controller recertification records to verify timeliness, and testing criteria for proper performance of duties. All records were in compliance to SOP's.
3. Staff reviewed SRTD's SSPP and supporting SOP's to verify that SRTD has established a program to insure employees are qualified to perform their job duties in compliance with established rules and procedures.
4. While reviewing operator and supervisor-controller training records, Staff:
 - a. Verified that a process was in place to track training records. A training log is maintained in both a hard copy filing system and a matrix soft copy.
 - b. Reviewed SOP-99-030 to verify that safety related work requiring training and recertification were identified.
 - c. Reviewed SOP-99-030 and SOP-12-200 to verify that job classifications requiring initial and refresher training and certification were identified.
 - d. Reviewed efficiency testing records to verify a process was in place to assess compliance to SRTD's training and recertification requirements (Please refer to 13-A).
 - e. Interviewed SRTD Operations Staff to verify that corrective actions take place to discipline employees for failure to follow operating rules and procedures. The discipline is progressive, although subject to the collective bargaining units that operate at SRTD. Performance based discipline is outlined in the Efficiency Testing Program (Please refer to 13-A). Attendance issues are handled through the Human Resource Department, but will be addressed again during a Level II observation (between a Group Supervisor and the Operator), which is performed twice per year.
5. Staff reviewed training records to:
 - a. Verify both hard and soft copies of records are kept.
 - b. Verify that training consists of both classroom and hands-on training, as per SOP-99-030.
6. Staff reviewed training and recertification records for past reviewed employees and determined that:
 - a. All employees complete the initial, refresher, and remedial training as necessary.
 - b. The course content was appropriate and adequate to meet training and recertification requirements.
 - c. The employees have been recertified at the correct frequency, and currently meet the criteria to operate a vehicle.
7. Staff interviewed Safety Personnel to assess the role of Safety in supporting and evaluating SRTD's training needs and program. Staff was advised that through monthly Staff meetings, monthly Department head meetings, and through Safety review of training programs,

revisions are implemented whenever there are changes in operating rules and procedures, either from Federal or State mandates or from changes in carrier rules and procedures.

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	16	Element	Training and Certification Programs: Employees and Contractors
Date of Audit	June 6, 2014	Department(s)	Operations Department
Auditors/ Inspectors	Debbie Dziadzio Daniel Kwok Michael Warren	Persons Contacted	Laura Espinoza Fred Diringier Vern Barnhart

REFERENCE CRITERIA

1. General Order 164-D.
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014.
3. Rail Maintenance Worker Safety Certification, LR-SOP-01-426
4. Lineworker Safety Certification. LR-SOP-01-425.
5. LR-SOP-00-226, LRV Maintenance Employee Training.

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Training and Certification Programs: Employees and Contractors

Interview SRTD representative(s) responsible for Wayside and LRV Maintenance Personnel training and certification programs, and review records for at least 3 active employees and 2 active contractors (if applicable) to determine whether:

1. Employees and contractors have completed the initial training program, refresher, and remedial training as necessary.
2. Employees and contractors have been certified, and recertified at the required frequency, and currently meets all criteria for proper performance of his or her duties.
3. Review any rules related to the training and certification program for employees and contractors and determine if they have been updated and distributed to SRTD personnel.
4. Verify that, in the SSPP and referenced or supporting procedures, SRTD has established a program to ensure that employees and contractors are qualified to perform their job duties in compliance with established rules and procedures.
5. Through a records review:
 - a. Verify that a process for maintaining and accessing employee and contractor training records is in place.
 - b. Verify that categories of safety-related work requiring training and certification have been identified.
 - c. Verify that employee and contractor job classifications requiring initial and refresher training and certification have been identified.
 - d. Verify that SRTD has a process is in place to assess compliance with its training and

- certification requirements.
- e. Verify that corrective actions taken to discipline employees and contractors for failure to follow established procedures once trained and certified are established and consistent.
6. Review training programs to verify:
 - a. That training records are maintained in both hard copy and soft copy formats.
 - b. That training consists of both classroom and hands-on training.
 - c. Verify that contractor training requirements are specified in contract documents.
 - d. Review documents and verify that requirements are being met.
 7. Randomly select at least three (3) RTA employees in each of the following classification
 - a. Track Inspector
 - b. Vehicle Maintainer
 - c. Contractor
 8. Review training and recertification records for the above employees for the past three (3) years to determine if:
 - a. The employee has completed the initial training program and refresher and remedial training as necessary.
 - b. The course content was appropriate and adequate to meet training and recertification requirements.
 - c. The employee has been recertified at the correct frequency and currently meets the criteria to operate a vehicle or perform maintenance work.
 9. Conduct interviews with representatives from the Safety Department to:
 - a. Assess the role of safety in supporting and evaluating the SRTD's training needs and programs. Verify that training programs are reviewed and revised as necessary to ensure accuracy and relevance to current operations and maintenance.
 10. Conduct interviews with SRTD training representatives to:
 - a. Determine the expertise of the trainer(s).
 - b. Determine the extent and types of training offered.
 - c. Determine if budget constraints have prevented training.
 - d. Determine how changes to training programs are communicated to the Safety Department prior to their implementation.

FINDINGS AND RECOMMENDATIONS

Activities:

1. Staff reviewed Rail Maintenance Worker Safety Certification (LR-SOP-01-426), Lineworker Safety Certification (LR-SOP-01-425), and LRV Maintenance Employee Training (LR-SOP-00-226). On items relating to the Contractor Safety Program, please refer to Checklist 13-D. A log is maintained for personnel in Operations, Maintenance, and Wayside in both hard copy and matrix and dBase soft copy. Safety maintains a log for Contractors. The frequency for recertification is mandated by SOP-99-030 (i.e. T.O's every 12 months, Maintenance every 18 months, Wayside every 24 months).

2. Staff reviewed records for required frequency:
 - LRV Technicians – due every 18 months:
5 recertification records reviewed
 - Wayside Personnel – due every 24 months:
6 recertification records reviewed – 5 employees received their recertification training late.
 - Contractors – please refer to Checklist 13–D:
Per Safety Department Representative, no Contractor is certified. All contractors are required to attend an On-Track-Safety class. An SRTD Escort is always present when contractors are performing duties wayside.
3. Please refer to #2. There has been no change in recertification frequency for the above personnel.
4. Staff interviewed Operations, Maintenance, Wayside, and Safety personnel. For Operations personnel, observations to ensure qualifications to duties are included in the efficiency testing program. Wayside personnel, including contractors, are observed to ensure qualifications to duties via Road Supervisors, who perform their own form of efficiency testing. There is no formal efficiency testing program for Maintenance personnel. Observations occur daily, non-compliance is handled daily. However, there is no formal program to establish or track trends.
5. Staff reviewed the following:
 - a. Please refer to #'s 1 and 4. Staff verified that the Safety Department is involved in all aspects of training and work responsibilities through review of various training SOP's, syllabus(s), PowerPoints, Tech Manuals.
 - b. Staff reviewed logs maintained by Wayside, Maintenance, Operations, Safety to ensure which job classification is to be trained and recertified in the various training arenas (i.e. Rule Book, Lock-Out/Tag-Out, APTA standard training, On-Track Safety Program, Hazmat, First Aid, CPR, AED, Respirator, Hearing Audio Metric, Drug & Alcohol). The Maintenance Training Coordinator works closely with the Light Rail Operations Trainer.
 - c. Staff interviewed SRTD Staff and determined that the testing process during training as well as the hands-on training accessed compliance with the training requirements.
 - d. Staff learned that corrective action plans, including discipline for employees who fail to comply with established procedures are in accordance with the agreement between SRTD Management and their bargaining units. For SRTD personnel, the discipline is progressive, starting with coach and counsel sessions, write-ups, and possible termination. Safety determines if a contractor is barred from SRTD property due to rules and procedure non-compliance.
6. Staff verified that:
 - a. Training records are maintained on both hard and soft copies
 - b. Training consists of both hands-on and classroom time
 - c. Verified that Contractor training requirements are specified in contract documents. Staff reviewed the bidding process for Northeast Corridor Fiber Optic Installation Phase 2 that specifies training requirements for contractors and their employees.

- d. See C.
- 7. Please refer to #'s 1, 2, 3
- 8. Please refer to #'s 1,2,3
- 9. Staff interviewed representatives from Safety Department and was advised that safety is involved in all aspect of training. Staff reviewed signatures of all department heads present during SSPP and SOP review. Safety concerns are addressed during the Hazard Resolution Fire/Life Safety Committee meetings. Included in all training review are the bargaining units, Management, and the Trainers.
- 10. Staff interviewed various SRTD Staff and determined:
 - a. The various Trainer(s) at SRTD are experts in their fields
 - b. Training in-house covers all areas of operation. Additional training occurs at Los Rios Community College and Sacramento City College. Also, SRTD has participated in class room training provided by the Department of Labor (Transportation Learning Center).
 - c. Per Director of Light Rail budget constraints do prevent as much training as the agency would like to utilize, primarily including more mechanical personnel in CDL training.
 - d. There is no formal process to communicate with the Safety Department when changes are made to the training programs. Due to the nature and size of SRTD, all SRTD Staff advised a more informal process occurs which includes daily communications via email, face to face, radio to relay changes in training programs.

Findings:

- 1. Three LRV Technicians received late safety recertification training and Five MOW Employees received late safety recertification training
- 2. SRTD has no written program that ensures that LRV Maintenance personnel are in compliance with established rules and procedures.

Comments:

- 1. Trainers are very skilled with working within their budget to give their responsible employees the best variety of training they are capable of, but are still constrained and unable to provide a desired level of training.

Recommendations:

- 1. SRTD should establish and follow a written schedule for ensuring all safety-sensitive employees receive their Rulebook recertification training as prescribed by GO 143-B, Section 13.03.
- 2. SRTD should develop a program to monitor LRV Maintenance personnel's compliance with approved procedures per SSPP, Section 5.3.1, and GO 143-B, Section 13.04. (See also Recommendation # 5, checklist 13-A)

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	17	Element	Configuration Management and Control
Date of Audit	May 28, 2014	Department(s)	Engineering Department
Auditors/ Inspectors	Joey Bigornia	Persons Contacted	Darryl Abansado, Director of Civil & Track Eric Oparko, Quality Assurance Administrator Rufus Francis, Director of Safety

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD System Safety Program Plan (SSPP) dated January 2014
3. Configuration Management Plan

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Configuration Management and Control

1. Verify the “*Configuration Management Plan*”, the SSPP and/or referenced and support procedures includes the following:
 - a. the authority to make configuration changes
 - b. process for making changes, and assurances necessary for all involved departments to be formally notified
 - c. The system’s baseline system configuration process.
 - d. A tracking mechanism for the evolution of the system through its life cycle.
 - e. An Interface process or an attendant “Interface Coordination Document” that defines this process and responsibilities.
 - f. Methods used to track configuration control changes, such as engineering change requests (ECRs), engineering change notices (ECNs), field modification instructions (FMIs), etc.
2. Randomly select two recent SRTD system modifications or a Project Concept submitted and verify that:
 - a. Modification and Change Request Forms were used;
 - b. Modification and Change Request Forms were circulated;
 - c. The required review, analysis, and approval of the Modification and Change Request Forms for the project were completed;
 - d. The modification or change was circulated to the proper departments prior to implementation;
 - e. All necessary parties or contract employees within or outside the agency were properly notified of the modification or change;
 - f. As-Built Drawings were updated if necessary;

- g. As-Built Specifications were updated if necessary.

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed the SRTD Engineering Department and SRTD Safety Department representatives responsible for Configuration Management and Control and determined the following:

1. (a – c) SRTD’s SSPP Section 17.0 and SRTD’s internal and external (e.g. Outside) system modification projects follow the requirements of SRTD’s Configuration Management Plan (CMP) PC-SOP-96-001. The CMP identifies all requirements such as reviews & approvals necessary before a system modification is finalized and change is authorized.
(d-f) The QA Administrator maintains the Configuration Change Request Log Master List which identifies all open and closed projects subject to changes. The spreadsheet identifies the initiator, As-Built drawings subject for revision, justification, CRC Meeting Minutes where project was initially discussed, pending project on-hold for resources, completion date, and implementation date.
2. Staff reviewed the following two projects:
 - a. CAF Light Rail Vehicle Track Brake Modification CR No 026-09.
Staff reviewed the CCR Form and project file and determined the CMP process was used throughout the process. The project was initiated on August 26, 2009, by LRV Maintenance Supervisor, The Department Head accepted project on September 1, 2009, and the Director of System Design, Director of Safety, and QA Administrator all accepted the project on October 1, 2009. Project is currently tracked on the CCR Log and is on-going (OPEN).
 - b. Aerojet Crossing Modification CR No. 048-12
Staff reviewed a recent CCR Form and project file and determined the CMP process is being used on this project. The project was initiated on February 17, 2012, by Systems Engineer, The Department Head accepted project on February 20, 2014, and the project is still in the design phase and it has not been accepted by the configuration management committee to proceed to construction. A GO 88 was filed by the County of Sacramento and SRTD was required to review, comment, and approve of County’s proposed project. The CPUC issued an approval letter to County of Sacramento on December 20, 2010, for the GO 88 however, funding was not available when CPUC issued letter. SRTD will resubmit a new GO 88. Project is currently tracked on the CCR Log and is on-going (OPEN).

Findings:

None

Comments:

None

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	18	Element	Local, State, and Federal Requirements: Employee Safety Program
Date of Audit	June 3, 2014	Department(s)	Safety Department
Auditors/ Inspectors	Rupa Shitole	Persons Contacted	Nick Panos (Safety Specialist II) Rufus Francis (Director of Safety)

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD System Safety Program Plan (SSPP) dated January 2014

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Local, State, and Federal Requirements: Employee Safety Program

Interview personnel and review appropriate records to determine whether:

1. SRTD holds monthly meetings to discuss safety issues.
2. An appropriate procedure and reporting form is being implemented, and is distributed to all employees to effectively report safety hazards in the work place.
3. Required corrective actions have either been satisfactorily completed or are being actively tracked and documented.
4. Verify that the SSPP and referenced/supporting procedures include a description of the safety program for employees and contractors that include applicable local, state, and federal requirements.
5. Verify that SRTD's employee and contractor safety programs incorporate all elements required by local, state or federal law.
6. Verify that the safety requirements that employees and contractors must follow when working on, or in close proximity to SRTD controlled property, are in place.
7. If SRTD has ever had a problem with complying with local, state, or federal requirements, review past documentation to verify how the issue was handled and resolved by SRTD.
8. Verify construction projects have specific procedures in place to ensure worker protection and public safety by fostering an awareness and concern for safety on the job site.
9. Verify that implementation of these procedures is the responsibility of the contractor organization performing the work and SRTD.
10. Verify SRTD's operating and maintenance safety rules and procedures are included in construction contracts to bind contractors and employees to fulfilling their roles and responsibilities safely.
11. Verify that SRTD has a process in place for ensuring employees and contractors know and

follow safety rules and procedures.

12. Verify appropriate forms of disciplinary action are taken consistently to correct employees and contractors who have not followed established safety rules and procedures.
13. Randomly interview employees and contractor personnel to determine their levels of awareness regarding local, state, and federal laws.
 - e. Are they aware of OSHA Right to Know regulations?
 - f. Are contractors aware of the penalties that may be imposed if they fail to comply with laws and regulations?
14. Conduct field inspections of SRTD facilities to verify basic OSHA or state equivalent requirements are being met (i.e., general housekeeping of maintenance facilities, employee use of PPE, hazardous materials storage and MSDS locations, provision of eye wash stations, first aid kits, and fire extinguishers, provision of fall protection and/or warning systems around maintenance pits, etc.).

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed the SRTD representatives responsible for the Employee Safety Program and determined the following:

1. SRTD holds monthly meetings to discuss safety issues. The meeting minutes for IBEW – RT Safety Committee Meeting was reviewed for April 2013, July 2013, February 2014, and May 2014.
2. SRTD conducts Safety Orientation training for all new employees. Staff reviewed the power point presentation material for “Safety Programs and SOPs” that is a part of the Safety Orientation training. The training discusses various topics related to local, state and federal requirements. Additionally, SRTD SAFE-1 Form was reviewed that SRTD uses to report any unsafe condition or hazard within the system. Also, Injury and Illness Prevention Program (IIPP) is a part of this training. All employees have access to the online materials via SRTD’s intranet website known as “Headways”.
3. Staff reviewed the following records to determine if corrective actions were tracked, completed and documented as required:
 - a. Bus Shelter was hit - November 23, 2012
 - b. Bus Shop Facility (Paint Issue resolved and closed) - November 18, 2012
 - c. Over Cluttering (Hoist moved) – June 24, 2013
 - d. Metro & MHRF Building (Light Issue) – December 23, 2013 - Staff reviewed the SAFE-1 Form related to issue and the work is still in progress to be completed June 19, 2014.
 - e. Bus Parking Facility (repainted and lighting fixed) – January 10, 2014
 - f. Cold Weather Condition (worker got sick) – February 13, 2014
4. SRTD’s SSPP dated January 2014 Chapter 18 refers to the employee safety program that includes local, state and federal requirements.
5. SRTD’s IIPP document covers all requirements for employees and contractors required by

local, state and federal requirements.

6. Refer to checklist #13-D for more details in reference to safety requirements for employees and contractors must follow when working on, or in close proximity to SRTD controlled property, are in place.
7. SRTD did not have problems complying with local, state, or federal requirements for years 2012 and 2013 but in December 2013 Cal OSHA issued a citation for a secondary container containing chemical was not labelled properly. SRTD resolved this issue and conducted a tool box topic discussion for all employees to be aware of this situation and learn a lesson.
8. SRTD's SSPP dated January 2014 Chapter 18 Section 18.2 and 18.3 describe the process to ensure worker protection and public safety. The Roadway Worker Protection (RWP) program has been developed for employees and contractors to follow when working around the rail tracks.
9. SRTD have procedures in place for the contractors to follow specifications in the bidding process. The contract spells out clearly the responsibilities of the contractor and SRTD.
10. SRTD's contractors and employees have to follow the RWP program that deal with operating and maintenance safety rules and procedures. Depending upon the job responsibilities and functions to be performed each individual gets training based on their needs.
11. SRTD RWP program and other safety training ensure employees and contractors know and follow safety rules and procedures.
12. SRTD Safety stated that they take disciplinary action if it is necessary to correct the situation. An example was shared. SRTD stopped a contractor's work in May 2012 and took disciplinary action. There was nothing unsafe but could have been a potential hazard. Staff reviewed documents related to STOP WORK ORDER dated May 14, 2012 and SRTD resolution to fix it.
13. Staff visited the MHRF facility and interviewed Badge ID#3397 and ID#1485 for their awareness of OSHA Right to Know regulations. No contractors were available during this interview. Additionally, On Track Safety training covers local, state, and federal requirements.
14. Staff conducted field inspections of the MHRF facility and verified general housekeeping, employee use of PPE, hazardous materials storage, MSDS location, and provision of eye wash stations, first aid kits, and fire extinguishers. Minor deficiencies were noted and discussed with SRTD personnel. Refer to comment section for more details.
15. Staff reviewed the State Water Resources Control Board (SWRCB) Storm Water Prevention Plan annual report dated 2012-2013. This is a required annual report to be submitted to the County.
16. Staff reviewed the IIPP as a reference document.

Findings:

None

Comments:

Staff discussed with Badge ID#1485 in regards to propane storage area "No smoking" signs were fading. Also, SRTD needed to add more "No smoking within 25 feet" signs around propane storage area. An empty cylinder was missing a cap.

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	19	Element Hazardous Materials Program
Date of Audit	June 03, 2014	Department(s) Safety Department
Auditors/ Inspectors	Rupa Shitole Mike Borer	Persons Contacted Nick Panos (Safety Specialist II) Rufus Francis (Director of Safety)

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD System Safety Program Plan (SSPP) dated January 2014
3. FM-SOP-06-022, Hazardous Materials Management Program

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Hazardous Materials Program

1. Select at random at least two SRTD employees responsible for handling hazardous materials, (hazmat) and verify that they have received specific training for reporting requirements, product release or spill, and spill incident response and clean-up.
2. Verify that hazardous materials discharge/spill reports for incidents in the past 12 months have been prepared and filed properly.
3. Verify that all MSDSs are available to all personnel who handle hazardous materials.
4. Verify that the SSPP and/or referenced and supporting procedures contain a description of the hazardous materials program, including the process to ensure knowledge of and compliance with the program requirements.
5. Review any rules related to SRTD's hazardous materials program and determine if they have been updated and distributed to SRTD personnel.
6. Verify that a hazmat program is documented in a hazardous materials plan or procedure.
7. Verify that the transit agency has developed an OSHA or state equivalent compliant hazmat program (if applicable).
8. Verify that the program includes a process to familiarize the employees with the hazards presented by materials used in the work place and the Employee Safety Program.
9. Verify the program assigns roles and responsibilities to specific departments and personnel for reviewing and approving materials used or to be purchased and used on transit agency property.
10. Verify that follow-up activities are performed to verify field use of approved materials to ensure that safe and proper use, handling, storage, and disposal methods are employed.
11. Verify that all MSDS are available to all personnel who work with hazardous materials.

12. Interview RTA Safety Department representatives to discuss SRTD's hazardous materials program and the role of the RTA Safety Department in enforcing this program. Be sure to discuss the following:
 - a. The procurement process for insecticides, herbicides, chemicals, and solvents.
 - b. If a MSDS for each hazardous material is on file with the System Safety Department.
 - c. If the approved MSDSs have been entered into an MSDS filing system for tracking.
13. Observe SRTD maintenance personnel working with hazardous materials. Ensure that they follow all applicable rules and procedures. Note any discrepancies.
14. Verify the appropriate personal protective equipment (PPE) is provided and used as required by the MSDS, material manufacturer, and SRTD.

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed the SRTD representatives responsible for the Hazardous Materials Program and determined the following:

1. Staff visited the maintenance repair facility to randomly question SRTD employees responsible for handling hazardous materials. SRTD employee Badge #3397 and #1485 stated approximate 80 employees receive training on hazmat. SRTD Safety stated that employees working with hazardous materials only receive on-the-job training related to those hazardous materials. They are not required to be HAZWOPER trained. On-the-job training and Hazardous Communications training includes the clean-up of minor and incidental spills generated as part of normal work duties. Any spills other than minor and incidental spills are remediated through contract services with a hazardous waste clean-up contractor. Staff reviewed a few sign-in sheets related to Hazardous Communication/MSDS training for the last 3 years.
2. SRTD stated that there were no incident reports of discharge/spills prepared or filed in the past 12 months.
3. MSDSs are available onsite and online (Headways) at all facilities. SRTD Office on the 29th Street had MSDSs available to all personnel. Also, Staff visited the MHRF facility at Academy Way and reviewed the MSDSs location and accessibility to all personnel.
4. SRTD's SSPP dated January 2014 Chapter 19 refers to the Hazardous Materials Program and its overall requirements.
5. SRTD stated that they conduct monthly tool box topic for all employees. Staff reviewed safety tool box topic #4-14 related to Hazardous Materials and sign-in sheet for #3-14 related to Fire Safety.
6. FM-SOP-06-022 (Hazardous Material Management Plan) dated July 7, 2006, was reviewed. This plan documents the hazmat requirements.
7. Refer to bullet #6. Yes, SRTD has developed an OSHA or state equivalent compliant hazmat program.
8. SRTD Safety Orientation training along with the Hazardous Materials Management and

Hazardous Communication Programs training for hazmat employees includes a process to familiarize the employees with the hazards present by materials used in the work place.

9. Refer to bullet #6 and #8. The hazmat program is well defined with roles and responsibilities to specific departments for reviewing and approving materials to be used on SRTD property. Reviewed some emails from 2014 requesting Safety Department for review and approval of MSDSs for new chemicals purchase.
10. SRTD conducts monthly inspection for all facilities and weekly inspection for all hazardous material storage areas. Staff reviewed the following monthly inspections for January 14, 2014 and September 29, 2013. Also reviewed the Weekly Hazardous Waste Storage Area Inspection dated March 2014 for Bus Maintenance. Additionally, SRTD stated that safety walk through are done once a month that may be random or frequent.
11. Refer to bullet #3.
12. The role of SRTD Safety Department is defined in section IV.1 of the FM-SOP-06-022 (Hazardous Material Management Plan) dated July 7, 2006. Safety Department does review and track the MSDS request for new chemical purchase. All approved MSDSs for each hazardous material is present on file and online.
13. Staff could not observe any personnel working with hazardous materials during the time of this audit.
14. SRTD's Hazardous Material Management Plan describes the employee responsibility in Section IV.6 of this Plan. No personnel working with hazardous material was available to observe during this audit.
15. Additionally, Staff requested records related to minor/small, major/large, and or unique spills as per the procedures. SRTD stated that major/large and or unique spills are contracted out due to SRTD personnel not trained nor equipped to respond to the spill. During the Academy Way Facility interview with SRTD employee Badge #3397, it was stated that if they have minor/small spills it is documented on the Regional Transit Light Rail Occurrence Report. A blank copy of this report was provided. There was no record of spill reports since SRTD Academy Way Facility did not have any during the last three years.
16. Finally, Staff requested inspection reports related to section IV.5 t & u of the FM-SOP-06-022 (Hazardous Material Management Plan) dated July 7, 2006. No records of weekly inspections were produced related to Academy Way Facility.

Findings:

1. SRTD was not able to provide weekly inspection records related hazardous material storage areas for the Academy Way Facility as per their procedures (Refer to item #16 above).

Comments:

All SRTD personnel should be on the same page in regards to using appropriate forms for minor/small, major/large, and or unique spills. During the facility inspection there was a disagreement as in whether the Regional Transit Light Rail Occurrence Report is used or not to document any kind of small/minor spill.

Recommendations:

1. SRTD should follow their own procedures regarding hazardous materials area inspections accordingly or revise them to reflect current practices. Additionally, SRTD should maintain and provide requested documents as per GO 143-B requirements.

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	20	Element	Drug and Alcohol Program
Date of Audit	June 27, 2014	Department(s)	Employee Relations Department
Auditors/ Inspectors	Debbie Dziadzio	Persons Contacted	Rufus Francis Dan Bailey Mariza Montung-Fuller Rob Hoslett

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD Rail System Safety Program Plan (SSPP) dated January 2014
3. SRTD Drug and Alcohol Testing & Rehabilitation Policy.
4. 49 CFR 655–Prevention of Alcohol Misuse and Prohibited Drug Use in Transit Operations

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Drug and Alcohol Program

Interview SRTD representatives and review appropriate records prepared in the past 12 months to:

1. Verify that the number of employees in safety-sensitive positions who tested non-negative or refused to take the test was reported accurately.
2. Verify that SRTD has a policy for managing the use of over-the-counter drugs.
3. Select at random at least two safety-sensitive employees who tested non-negative for drugs or alcohol in the past year. Determine whether:
 - 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 required follow-up testing frequencies in the reference documents after the employee returned to duty.
4. Verify that the SSPP contains a description of SRTD’s drug and alcohol program requirements.
5. Verify that SRTD has a drug and alcohol policy and that it is consistent with federal and state requirements.
6. Review any rules related to the SRTD’s Drug and Alcohol Program and determine if they have been updated and distributed to SRTD personnel and to contractors.
7. Assess whether the SRTD has ever undergone a federal or state audit of its drug and alcohol program?

- a. If so, what were the outcomes?
- b. Have all findings or recommendations been addressed?
8. Review training program curriculums to verify SRTD is training all employees regarding its drug and alcohol policy.
9. Confirm that this information was accurately reported to FTA through the RTA's annual submission to the Drug and Alcohol Management Information System (DAMIS).
10. Interview SRTD Safety Department personnel to verify that they are familiar with the requirements and are implementing the program according to federal standards.
11. Ensure SRTD Safety Department personnel support implementation of the SRTD's post-accident drug and alcohol testing during accident investigations.

FINDINGS AND RECOMMENDATIONS

Activities:

1. Staff reviewed USDOT MIS Data Collection Form, a yearly report sent to the FTA (dated March 15, 2014) regarding safety-sensitive personnel who either refused or tested non-negative for 2013.
2. Staff reviewed SRTD's Drug and Alcohol Testing and Rehabilitation Policy dated April, 2014.
3. Staff asked for a list of all personnel who tested non-negative or refused testing for 2013. Staff observed that a total of 5 people were recorded as refusal or non-negative. Staff reviewed 2 people from above list. Reviewed their SAP and EAP evaluations and their Employee File.
4. Staff reviewed SRTD's SSPP dated Jan, 2014 regarding their drug and alcohol program and requirements.
5. Staff reviewed 49 CFR 655 and CPUC 164-D
6. Staff was advised that SRTD reviews and updates all policies. The last FTA audit was in January 2014 and the policy has been updated (verbiage, grammar, type fonts). Staff asked for the procedure that SRTD utilizes to ensure all personnel are updated to the changes. Staff was advised that updates are mailed via USPS to all safety-sensitive personnel, to the Union Representatives, and the updates are posted.
7. Staff inquired about the last Federal and State Audits and was advised that the last CPUC audit was May, 2011. No updates were noted or mandated. The last FTA audit was Jan, 2014. Updates included minor changes to verbiage, grammar and type font. The updates have occurred. They are present in the current Drug and Alcohol Testing and Rehabilitation Policy dated April 14, 2014.
8. Staff reviewed the entire training curriculum for safety-sensitive employees and supervisors which included PowerPoints, handouts, USDOT Drug & Alcohol Policy and Compliance, tests, for safety-sensitive employees as well as the additional Suspicious Scenarios and Post Accident Scenarios and training, and guidelines for the supervisors. All new hires go through Drug and Alcohol training. Labor Relations is notified when SRTD hires new personnel. Also, the Trainers will notify Labor Relations when a new hire class is starting.
9. Staff reviewed DAMIS, which was dated and sent to the FTA March 15, 2014.

10. Staff asked SRTD Safety Department personnel if they were involved with the review and updates of policies. SRTD Safety Department is involved with all SOP reviews and updates and signs off on all the reviews and updates. This complies with SRTD's SSPP.
11. Staff asked SRTD's Safety Department personnel what were the requirements notated in the Post Accident Drug and Alcohol Testing Process for Accident Investigation. The Safety Department Personnel answers complied with the Drug and Alcohol policy and SSPP.

Findings:

None

Comments:

Personnel should be 'refreshed' or 'retrained' periodically in the Drug and Alcohol Program. Currently, an employee takes the class one time. All personnel were refreshed after FTA Audit January 2014.

Recommendations:

None

2014 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	21	Element Procurement Process
Date of Audit	June 04, 2014	Department(s) Procurement Services
Auditors/ Inspectors	Rupa Shitole Jason Dixon	Persons Contacted Juliette Terry (Senior Procurement Analyst) Rufus Francis (Director of Safety)

REFERENCE CRITERIA

1. General Order 164-D
2. SRTD System Safety Program Plan (SSPP) dated January 2014
3. GM-SOP-97-009

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Procurement Process

Interview SRTD representatives and review appropriate documentation to:

1. Verify that SRTD personnel are following applicable procurement quality assurance procedures, and ensure safety issues and concerns are addressed in the procurement process.
2. Determine that adequate procedures and controls are in place to preclude the introduction of defective or deficient equipment into the SRTD System.
3. Determine that adequate procedures are in place to deal safely with defective or deficient equipment in the event such equipment is introduced into the SRTD System.
4. Verify that the SSPP and any referenced or supporting procedures include a description of the process used by SRTD to ensure that safety issues and concerns are addressed in the procurement process. Ensure that any updated rules relevant to SRTD procurement process are communicated appropriately.
5. Verify that the SSPP contains a description of the basic procurement processes that must be followed by SRTD to assure that safety concerns and issues are addressed.
 - a. Is the procurement process tied to SRTD's hazard management process?
 - b. Are procurements of new equipment and material first reviewed by the safety department, engineering, operations, and/or maintenance staff to verify the new equipment or materials won't present a hazard to the existing system?
 - c. Do all procurement processes for hazardous materials address all appropriate rules and regulations?
6. Interview Safety Department representatives, and have them explain how they work through their procurement process to ensure that safety issues are identified, assessed, and resolved.
7. Interview SRTD personnel responsible for procurement to verify that they are aware of, and

are following, the SRTD's processes to ensure that safety issues and concerns are addressed in the procurement process.

FINDINGS AND RECOMMENDATIONS

Activities:

Staff interviewed the SRTD representatives responsible for the Procurement Process and determined the following:

1. Staff verified that SRTD has adequate procurement process in place. SRTD's Procurement Policy Manual dated December 30, 2009 was reviewed. Chapters 4, 6, and 19 overall describes the process of procurement quality assurance/quality control procedures, ensure safety issues and concerns are addressed appropriately for each individual project. Also, Ordinances and Procedures are used to procure materials and equipment. The following documents were reviewed:
 - a. Invitation to BID for purchase of Dynamic Message Sign (DMS) BID Doc. #2013115 dated January 2014.
 - b. BUZZSAW database is used to track Procurement and Engineering status for all projects.
 - c. Submittal Data Form dated February 13, 2014, approved by Quality Control and Project Manager.
 - d. Request for information RFI No:0295 dated May 28, 2014 (Active Formal Contract)
 - e. Contract for construction of SSCP2 dated July 25, 2013 (FID:46-2193462)
2. SRTD's contract document deals with special conditions section that describes the process in depth for Contractor Quality Control (CQC) general requirements. A section of this process describes the First Article Inspection, testing, and internal approval method by SRTD. Additionally, product identification and traceability process is described and how SRTD prevents the use of incorrect or defective equipment into the system. All SRTD's contract document includes time extension, warranty, and purchase order requirements as well.
3. SRTD does have an adequate procedure in place if defective or deficient equipment is introduced into the system. SRTD's Quality Assurance personnel conduct inspections and testing as required. Refer to 2.
4. Refer to 1.
5. SRTD's SSPP does contain the following:
 - a. Procurement process is tied to Hazard Management Process.
 - b. Procurement of new equipment is reviewed by all departments to verify the new equipment does not pose a hazard to the existing system.
 - c. All hazardous materials procurement addresses all appropriate rules and regulations.
6. SRTD's monthly meeting discusses safety issues if any related to procurement process. Parts may not be substituted without prior authorization of a Director/Manager within the department. Safety Department works in conjunction with the Procurement Department to identify and resolve safety issues if any.
7. SRTD personnel ensure that safety concerns are addressed in the procurement process

through contracts. All SRTD's contracts refer to Contractor Quality Control Program (CQCP).

8. Staff requested training records for procurement process staff training required at least once every two years as per the current SRTD procedure (GM-SOP-97-009). No records were provided during the interview. Although, Staff was provided with a DRAFT copy of an updated/revised procedure (PO-SOP-14-002). The DRAFT copy reflects the change in training requirement to be at least once in four years. The last training was provided to all procurement process staff in the year 2010.

Findings:

1. SRTD was not able to provide training records for procurement process staff training as per their procedures (Refer to item #8 above).
2. CPUC Staff conducted mechanical audits on April 28, 2014, and it was discovered that all LRV's in service have expired fire extinguishers as of December 2013. SRTD Mechanical Personnel were interviewed and advised CPUC Staff that Procurement Department had yet to complete contract to have extinguishers brought into compliance. SRTD Procurement Personnel interviewed was aware of expired fire extinguishers but could not complete contract in time.
3. During completion of Checklist #14F, it was discovered that SRTD had failed to have all instruments calibrated prior to annual expiration. SRTD Mechanical Personnel stated (June 3, 2014) that SRTD Procurement was responsible for failure to complete contract. SRTD Procurement Personnel was interviewed June 4, 2014, and advised CPUC Staff that they were unaware of calibration compliance failure.

Comments:

None

Recommendations:

1. SRTD should follow their own training procedures accordingly or revise them to reflect current training practices.
2. SRTD Should reevaluate the communications and feedback loop between its operations and maintenance departments and the Procurement Department to assure that needs are properly communicated and services, materials and equipment necessary are timely obtained.