

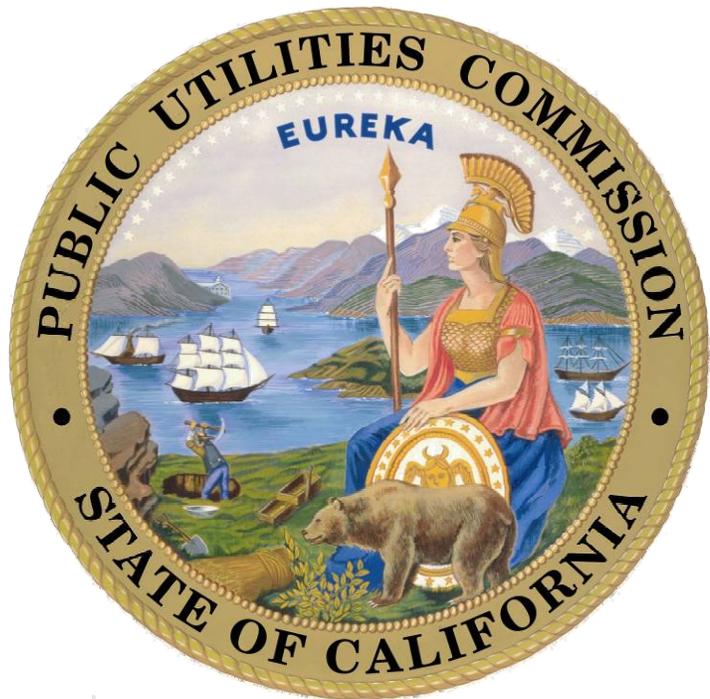
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# 2010 SAFETY REVIEW OF THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

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CALIFORNIA PUBLIC UTILITIES COMMISSION  
CONSUMER PROTECTION AND SAFETY DIVISION  
RAIL TRANSIT AND CROSSINGS BRANCH  
RAIL TRANSIT SAFETY SECTION  
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FINAL REPORT  
11/12/10



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2010 ON-SITE SAFETY REVIEW OF  
THE PORT OF LOS ANGELES  
WATERFRONT RED CAR LINE

ACKNOWLEDGEMENT

The Rail Transit Safety Section with assistance from the Utilities Safety and Reliability Branch of the California Public Utilities Commission conducted this system safety program review. Staff members directly responsible for conducting safety review and inspection activities include:

Anton Garabetian – Sr. Utilities Engineer  
Don Filippi – Sr. Operating Inspector  
Noel Takahara – Utilities Engineer (Leading Reviewer)  
Joey Bigornia – Utilities Engineer  
Michael Borer – Associate R/R Equipment Inspector  
Thomas Govea – Associate R/R Signal and Control Inspector  
Steve Intably – Utilities Engineer  
Claudia Lam – Utilities Engineer  
John Madriaga – Associate R/R Track Inspector

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## 1. EXECUTIVE SUMMARY

The Rail Transit Safety Section staff (staff) of the Consumer Protection and Safety Division (CPSD) of the California Public Utilities Commission (Commission) conducted an on-site safety review of the Port of Los Angeles Waterfront Red Car Line (POLA RCL) system safety program in August 2010. Staff performed the review with assistance from the Utilities Safety & Reliability Branch of the CPSD. The review was comprehensive in nature and addressed POLA RCL safety programs and practices in the design, operation, and maintenance of the system.

Staff performed records reviews of the POLA RCL safety program to ensure compliance with maintenance and operational requirements and regulations. In addition, staff performed physical inspections of POLA RCL tracks & switches, grade crossing and signaling equipment, streetcars (historic and replicated historic), and overhead catenary lines to ensure that POLA RCL meets industry maintenance standards.

The review results indicate that the POLA RCL has a comprehensive system safety program and that the POLA RCL effectively implements its System Safety Program Plan (SSPP). However, staff noted exceptions during the review which are described in the Findings and Recommendations checklist section. Staff found 3 recommendations for corrective action from the 16 checklists.

## 2. INTRODUCTION

The Commission's General Order (GO) 164-D, *Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems* requires staff to perform a review of each rail transit agency's implementation of its system safety program plan a minimum once every three years. The purpose of the triennial review is to verify compliance and evaluate the effectiveness of each rail transit agency's SSPP and assess the level of compliance with GO 164-D as well as other Commission and regulatory safety requirements. The last triennial safety review of the POLA RCL was in February 2007.

On July 14, 2010, staff mailed a letter to POLA RCL General Manager advising that the staff safety review had been scheduled for August 2010. The letter included 16 checklists that would serve as the basis of the review. Four of the 16 checklists outlined inspections of track, switches, signals, overhead catenary system, and rolling stock. The remaining 12 checklists focused on the verification and the effective implementation of the POLA RCL SSPP. Staff conducted records reviews to confirm implementation of requirements from the SSPP, standards referenced in the SSPP, POLA RCL standard operating procedures, POLA RCL related maintenance manuals, and other POLA RCL rules.

### 3. BACKGROUND

The POLA RCL is a tourist oriented rail system that began revenue operations in the year 2003 with construction and operations financed solely by the Port of Los Angeles (Port), an independent city agency that manages the port facility. The system is modeled after the historic Pacific Electric (PE) Red Car System utilizing one restored 1000 class PE Car and two replicated 500 class PE Cars. The normal hours of operation are Friday through Sunday from noon to 9:30 pm. Weekend ridership averages 1800 passengers a day with a total of 280,000 passengers carried in 2009. The POLA RCL General Manager is employed by the Port of Los Angeles and has the responsibility of general oversight of all POLA RCL operations including the management of interdepartmental and interagency relations and coordination. The contract operator of the POLA RCL is Herzog Transit Services Inc (Herzog). Track and signal maintenance is contracted out by the Port of Los Angeles to the Pacific Harbor Line (PHL) and Balfour Beatty Rail, Inc. Overhead catenary system maintenance is subcontracted out by Herzog to Mass Electric, Inc.

The POLA RCL system consists of 1.5 miles of track, three streetcars (one historic, 2 replicated historic), four stations, and a maintenance facility. The POLA RCL shares track with a short-line freight railroad, the Pacific Harbor Line. The document titled "The Petition for Approval of Shared Use and Waiver of Federal Railroad Administration Regulations Pursuant to 49 CFR Part 211" specifies temporal separation procedures and operational requirements for the POLA RCL and the PHL to ensure that they operate during separate and distinct operating time periods. Currently temporal separation procedures are not a part of day to day operations since freight rail operations have ceased. On rare occasions such as special events, PHL will coordinate with POLA RCL in accordance with the specified temporal separation procedures.

#### 4. REVIEW PROCEDURE

Staff conducted the review in accordance with the Rail Transit Safety Section Procedure RTSS-4, *Procedure for Performing Triennial On-Site Safety and Security Reviews of Rail Transit Agency*. Staff developed sixteen (16) checklists to cover various aspects of system safety responsibilities, based on Commission requirements, the POLA RCL SSPP, safety related POLA RCL documents, and the staff's knowledge of the transit system. The 16 checklists are included in Appendix D.

Each checklist identifies safety-related elements and characteristics reviewed or inspected by staff. Each of the checklists also references Commission, POLA RCL, and other documents that establish the safety program requirements. The completed checklists include review findings. If the review findings indicate non-compliances, then recommendations are included. The methods used to perform the review include:

- Discussions with POLA RCL management
- Reviews of procedures 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 reviewers and inspectors concluded the POLA RCL rail system has a comprehensive SSPP and is effectively implementing the plan.

Review findings identify areas where changes should be made to further improve the POLA RCL system safety program. The review results are derived from staff activities observed, documents reviewed, issues discussed with management, and inspections. Overall, the review result confirms that the POLA RCL is in compliance with its SSPP. The review identified 3 recommendations from the 16 checklists:

1. **Interdepartmental and Interagency Coordination**  
No Findings of non-compliance; no recommendations
2. **Hazard Identification and Resolution Process**  
No Findings of non-compliance; no recommendations
3. **Accidents/Incident Investigation and Reporting and Safety Data Acquisition**  
No Findings of non-compliance; no recommendations
4. **Track Maintenance, OCS Maintenance, and Facilities Inspections Records Review**  
No Findings of non-compliance; no recommendations
5. **Internal Safety Audit Process**  
No Findings of non-compliance; no recommendations
6. **Emergency Response Planning, Coordination, Training**  
No Findings of non-compliance; no recommendations
7. **Rules and Procedures Review, Operational Efficiency Tests**  
No Findings of non-compliance; no recommendations
8. **Training and Qualification Review Program, Drug and Alcohol Program**  
No Findings of non-compliance; no recommendations
9. **Configuration Management System Modification Review/Approval Process**  
No Findings of non-compliance; no recommendations

10. **Employee and Contractor Safety Program**

No Findings of non-compliance; no recommendations

11. **Hazardous Materials Program and Procurement**

No Findings of non-compliance; no recommendations

12. **Track Inspection**

Staff found the following non-compliant items:

- Anglebar with torch cut bolt hole at Mile Post (MP) 6.6
- Loose bolts at MP 6.13
- Insulation out of #1 rod at switch #23 MP 5.43
- Non-insulated gage rod next to crossing at MP 5.3
- Torch cut transit clip at switch #22 MP 5.1
- Derail stand not functioning at MP 5.1
- Bond strand cut at MP 4.62

**Recommendation:**

1. POLA RCL should replace and/or repair the mentioned non-compliant items in accordance with the POLA RCL SSPP track maintenance requirements referencing 49 CFR Part 213, Track Safety Standards.

13. **Signal Inspection and Records Review**

Staff found the following non-compliant items:

- The signal test/maintenance records of the 1<sup>st</sup> Street crossing do not indicate full compliance with CFR 234.255(c), CFR part 234.273, and POLA RCL SSPP section 11.3.
- The signal test/maintenance records of the 5<sup>th</sup> Street crossing do not indicate full compliance with CFR 234.267, CFR part 234.273, and POLA RCL SSPP section 11.3.
- The signal test/maintenance records of the 6<sup>th</sup> Street crossing do not indicate full compliance with CFR 234.253 parts (a) and (b), CFR 234.265, CFR part 234.273, and POLA RCL SSPP section 11.3.

**Recommendation:**

2. POLA RCL should comply with CFR 234.253, 234.255, 234.265, 234.267 by conducting the required tests and inspections.
3. POLA RCL should comply with CFR 234.273 and POLA RCL SSPP section 11.3 by maintaining and reviewing records as required.

14. **Rolling Stock Inspection and Records Review**

No Findings of non-compliance; no recommendations

15. **Overhead Catenary System Inspection**

No Findings of non-compliance; no recommendations

16. **Operational Observation**

No Findings of non-compliance; no recommendations

## **APPENDICES**

- A. Abbreviations List
- B. POLA RCL 2010 Safety Review Checklist Index
- C. POLA RCL 2010 Safety Review Recommendations List
- D. POLA RCL 2010 Safety Review Checklists

**APPENDIX A  
ABBREVIATIONS LIST**

Acronym	Definition
CFR	Code of Federal Regulations
Commission	California Public Utilities Commission
CPSD	Consumer Protection and Safety Division (of CPUC)
CPUC	California Public Utilities Commission
FRA	Federal Railroad Administration
GO	General Order
HTSI (Herzog)	Herzog Transit Services Inc.
LAFD	Los Angeles Fire Department
LAPD	Los Angeles Police Department
MP	Mile Post
MSDS	Material Safety Data Sheet
MSO	Manager of Streetcar Operations
OCS	Overhead Catenary System
PE	Pacific Electric
PHL	Pacific Harbor Line
POLA	Port of Los Angeles
POLA RCL	The Port of Los Angeles Waterfront Red Car Line
Port	Port of Los Angeles
RCL	Red Car Line
RTSS	Rail Transit Safety Section (of CPUC)
SOP	Standard Operating Procedure
SSPP	System Safety Program Plan
Staff	Rail Transit Safety Section Staff

**APPENDIX B**  
**2010 POLA RCL SAFETY REVIEW CHECKLIST INDEX**

Checklist No.	Element
1	Interdepartmental and Interagency Coordination
2	Hazard Identification and Resolution Process
3	Accidents/Incident Investigation and Reporting and Safety Data Acquisition
4	Track Maintenance, OCS Maintenance, and Facilities Inspection Records Review
5	Internal Safety Audit Process
6	Emergency Response Planning, Coordination, Training
7	Rules and Procedures Review, Operational Efficiency Tests
8	Training and Qualification Review Program, Drug and Alcohol Program
9	Configuration Management, System Modification Review/Approval Process
10	Employee and Contractor Safety Program
11	Hazardous Materials Program and Procurement
12	Track Inspection
13	Signal Inspection and Records Review
14	Rolling Stock Inspection and Records Review
15	Overhead Catenary System Inspection
16	Operational Observation

**APPENDIX C**  
**2010 POLA RCL SAFETY AND REVIEW RECOMMENDATIONS LIST**

No.	Recommendation	Checklist No.
1	POLA RCL should replace and/or repair the mentioned non-compliant items in accordance with the POLA RCL SSPP track maintenance requirements referencing 49 CFR Part 213, Track Safety Standards	12
2	POLA RCL should comply with CFR 234.253, 234.255, 234.265, 234.267 by conducting the required tests and inspections	13
3	POLA RCL should comply with CFR 234.273 and POLA RCL SSPP section 11.3 by maintaining and reviewing records as required	13

**APPENDIX D**

**2010 POLA RCL SAFETY REVIEW CHECKLISTS (16 CHECKLISTS TOTAL)**

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>1</b>	Interdepartmental and Interagency Coordination	
Review Date	8/11/10	Department	Operations
Reviewers	Anton Garabetian Noel Takahara	Persons Contacted	Ruben Montenegro – Manager Peter Kane – Director Safety

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Sections 5.2 and 17
3. Temporal Separation Agreement between the City of Los Angeles and the PHL

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Interdepartmental and Interagency Coordination**

Conduct the necessary interviews and review appropriate documentation prepared during the last three years to determine if:

1. Interdepartmental/interagency coordination of temporal separation procedures are adequate and in conformance to the reference criteria.
2. Coordination meetings take place on a monthly basis in accordance with Section 5.2 of the SSPP.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. Currently the POLA RCL track is not being shared with freight and therefore temporal separation procedures are no longer a part of routine daily operations. Permanent derailment devices are affixed to the track separating the POLA RCL from the general railroad, but the system currently remains under FRA oversight since the track is not completely severed.
2. Balfour Beatty and Pacific Harbor Lines are contracted by the Port of Los Angeles for signal and track maintenance. Mass Electric is contracted by Herzog for overhead catenary system maintenance duties. Herzog is the RCL operator and coordinates with all of the companies for day-to-day activities.
3. The POLA RCL general manager regularly meets with various departments to discuss safety matters.

Recommendations:

None

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>2</b>	Hazard Identification and Resolution Process	
Review Date	8/12/10	Department	Operations
Reviewers	Claudia Lam	Persons Contacted	Ruben Montenegro – Manager Peter Kane – Director Safety

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Section 7
3. POLA RCL monthly Facility Inspection Checklist

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Hazard Identification and Resolution Process**

Conduct the necessary interviews and review appropriate documentation prepared during the last three years to determine if:

1. Hazards are being identified, reported, and assessed a priority number according to the reference criteria.
2. Corrective actions in response to hazards are being tracked to completion.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. Herzog reports and documents hazards by processing one of the following three documents: Red Car Line Incident Report, Red Car Line Equipment Defect Reports, and Near Misses Report. The priority of the hazards reported are ranked by Herzog based on SSPP section 7 (3 priority levels) depending on the level of severity. Most of the hazards were resolved by Herzog within a few hours on the same day they were reported.
2. POLA RCL administrators have been using a tracking matrix called Log-Safety Issue which also contains the three levels of priority based on SSPP section 7. In addition, POLA RCL has recently created a Hazard Log which contains more detail of the hazard information such as the person in charge and expected date of completion.

Recommendations:

None

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>3</b>	Accident/Incident Investigation and Reporting and Safety Data Acquisition	
Review Date	8/12/10	Department	Operations
Reviewers	Claudia Lam	Persons Contacted	Ruben Montenegro – Manager Peter Kane – Director Safety

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Sections 8 and 16.
3. Herzog Red Car Line Accident/Incident Investigation Procedure

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Accident/Incident Investigation and Reporting and Safety Data Acquisition**

Conduct the necessary interviews and review appropriate documentation prepared during the last three years to determine if:

1. Reported accidents/incidents, including near misses, are being investigated according to the Herzog Red Car Line Accident Investigation Procedures
2. Safety data is being acquired and analyzed to prevent accidents.
3. POLA RCL is in conformance with the reference criteria.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. Staff interviewed POLA RCL management and reviewed records. No accidents occurred on POLA RCL since revenue inception. However, POLA RCL did record all wayside near misses on Near Miss Report. When there is a major incident/near miss incident, POLA RCL management provides training to the employees at the beginning of the shift to ensure they are aware of the recent incident and how they could have avoided it.
2. POLA RCL kept the safety data in the spreadsheet titled Herzog Transit Services Inc. (HTSI) Divisional Safety Stats which stores all the data to generate and analyze the claims to prevent further reoccurrence. Staff reviewed 1<sup>st</sup> Quarter 2010 Claims Review Summary Report that included plots and trends for analysis of the claims. If there is an obvious trend, POLA RCL discusses the issue/trend during the Internal Monthly Safety Meeting and Quarterly Corporate Meeting to help prevent the incidents.

3. Based on the interview and documents reviewed, POLA RCL is in conformance with the reference criteria.

Recommendations:

None

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	4	Track Maintenance, OCS Maintenance, and Facilities Inspections Records Review	
Review Date	8/12/10	Department	Operations and Maintenance
Reviewers	Noel Takahara	Persons Contacted	Ruben Montenegro – Manager

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Sections 10, 11.2, 11.4
3. 49 CFR Part 213
4. Mass Electric Construction Company OCS Maintenance Manual
5. Facilities Inspection Checklist

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Track Maintenance, OCS Maintenance, and Facilities Inspections Records Review**

Conduct the necessary interviews and review appropriate documentation prepared during the last three years to determine if:

1. Track Maintenance practices are compliant with the reference criteria.
2. Herzog is performing monthly inspections using the Facility Inspection Checklist according to SSPP Section 10.1.
3. OCS quarterly, annual, and biennial preventive maintenance is being conducted according to Chapter 10 of the OCS Maintenance Manual.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. Records indicate that PHL employee, James Connelly, walks the POLA RCL track (Mile Post 4.4 to 6.2) weekly for inspection. Inspection reports note the action taken by PHL to repair loose joint bars, bolts, trash, and other General Order and CFR Part 213 non-compliances.
2. Records indicate that Herzog administers the Facility Inspection Checklist on a monthly basis as required by the SSPP. The facility inspection checklist is composed of roughly 80 line items that investigate safety in terms of general operating conditions, fire safety, electrical safety, chemical safety, compressed gases, earthquake safety, hazardous waste, and personal safety.

3. Records indicate that Mass Electric is conducting OCS preventive maintenance at frequencies specified by the OCS maintenance manual. The OCS maintenance manual specifies for preventive maintenance on a quarterly, annual, and biennial basis.

Recommendations:

None

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>5</b>	Internal Safety Audit Process	
Review Date	8/12/10	Department	Operations
Reviewers	Claudia Lam	Persons Contacted	Ruben Montenegro – Manager Peter Kane – Director Safety

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Section 9

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Internal Safety Audit Process**

Conduct the necessary interviews and review appropriate documentation prepared during the last three years to determine if:

1. POLA RCL complied with the requirements of GO 164-D, Section 5.
2. POLA RCL properly documented Internal Safety Audits and submitted them to the CPUC on an annual basis prior to February 15<sup>th</sup> each year.
3. POLA RCL developed a 3 year auditing schedule for the 21 SSPP elements.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. POLA RCL hired Epic Consultant Corporation (Miami, Florida) to conduct the Internal Safety Audit (ISA) during the last 3 years. Epic Consultant Corporation compiled the ISA according to the requirements of General Order (G.O.) 164-D, Section 5.
2. POLA RCL properly documented and submitted to CPUC their Internal Safety Audit Report with corrective action status on an annual basis prior to 2/15 of each year which meets G.O. 164-D requirements.
3. POLA RCL management provided the documents that showed the 3 year auditing schedule developed by Epic Consultant Corporate which covered the 21 SSPP elements.

Recommendations:

None

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>6</b>	Emergency Response Planning, Coordination, Training	
Review Date	8/11/10	Department	Operations
Reviewers	Noel Takahara	Persons Contacted	Ruben Montenegro – Manager Peter Kane – Director Safety

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Section 14
3. Red Car Line Emergency Preparedness Plan (EPP)

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Emergency Response Planning, Coordination, Training**

Conduct the necessary interviews and review appropriate documentation prepared during the last three years to determine if:

1. POLA RCL is complying with the reference criteria.
2. Port Police have received appropriate training according to section 6.2 of the Emergency Preparedness Plan (EPP).
3. Herzog is conducting refresher training with the Port Police and Los Angeles Fire Department (LAFD) every two years.
4. Full scale scenario or tabletop exercise is being implemented every two years according to the SSPP.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. Herzog offers familiarization training to the Port Police and LAFD on an as needed basis according to the SSPP and EPP. New recruits of the Port Police are actively encouraged by Herzog to attend the familiarization training.
2. POLA RCL implements tabletop exercises every two years. The last tabletop exercise took place on June 12, 2008. Port Police, LAFD, and CPUC were present. POLA RCL contracted EPIC Consultants to moderate and manage the exercise. According to records the participants of the table top exercise simulated and discussed multiple emergency scenarios. The next tabletop exercise is scheduled for October 2010.

Recommendations:

None

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	7	Rules and Procedures Review, Operational Efficiency Tests	
Review Date	8/13/10	Department	Operations
Reviewers	Joey Bigornia	Persons Contacted	Peter Kane – Director, Safety & Compliance, Herzog Ruben Montenegro – Manager Streetcar Operation, Herzog Vincent C. Cipolla – FRA Certified Locomotive Engineers Instructor Daveeta Woodrum

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Section 12
3. Herzog Red Car Line (RCL) Program of Operational Tests and Inspections

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Rules and Procedures Review**

Conduct the necessary interviews and review appropriate documentation prepared during the last three years to determine if:

1. POLA RCL is complying with Section 12 of the SSPP.
2. Train Operator testing and inspection is being conducted according to the Herzog RCL Program of Operational Tests and Inspections.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. POLA RCL Procedures and Daily Orders are reviewed by the Manager of Streetcar Operations (MSO). The SSPP designates Herzog as the MSO. If revisions are necessary, Herzog and the POLA RCL General Manager will hold discussion and make necessary changes accordingly. The Daily Orders include all necessary orders and the Safety Rule of the Week.  
Staff found no exceptions.
2. Staff reviewed the following employee evaluation records for operators and conductors dated 2008-2010:

- Operator Engineer Performance Evaluation
- POLA RCL Operator & Mechanic Blue Signal Procedure Evaluation
- POLA RCL Rules Testing
- POLA RCL Operator & Attendant Training Program – Operating Rule Final Exam
- POLA RCL Engineer’s Physical Characteristics Exam

Upon successful completion of each Performance Evaluation, Herzog will renew the employee’s certification. Staff found no exceptions.

Recommendations:

None

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>8</b>	Training and Qualification Review Program, Drug and Alcohol Program	
Review Date	8/12/10	Department	Operations
Reviewers	Joey Bigornia	Persons Contacted	Peter Kane – Director, Safety & Compliance, Herzog Ruben Montenegro – Manager Streetcar Operation, Herzog Vincent C. Cipolla – FRA Certified Locomotive Engineers Instructor, Advance Railroad Concepts Daveeta Woodrum

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Section 13, 21

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Training and Qualification Review Program, Drug and Alcohol Program**

Conduct the necessary interviews and review appropriate documentation prepared during the last three years to determine if:

1. The training and qualification review program is compliant with SSPP section 13.
2. Annual training is administered to operating employees according to Section 13 of the SSPP.
3. Training of supervisors occurs every 3 years according to Section 13 of the SSPP.
4. Training of mechanical employees occurs every 2 years according to Section 13 of the SSPP.
5. All applicable employees according to the SSPP Section 21 received a copy of the Herzog Drug and Alcohol Policy.
6. All applicable supervisors according to the SSPP Section 21 received 3 hours training in the signs and symptoms of alcohol and drug influence, intoxication, and misuse.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. POLA RCL has the Herzog Program of Certification for Locomotive Engineer 49 CFR Part 240 effective date February 19, 2010 established for the training and review program.

POLA RCL has a Federal Railroad Administration (FRA) qualified consultant conducting the Performance Evaluation of all employees.

2. Staff reviewed the following employee evaluation records for operators and conductors dated 2008-2010:
  - a. Operator Engineer Performance Evaluation
  - b. POLA RCL Operator & Conductor Training
  - c. POLA RCL Operating Rules Testing
  - d. POLA RCL Timetable #3

A FRA qualified consultant performed all necessary training and tested the operator's knowledge of material. Upon successful completion of training and examinations, employee certification is renewed by FRA consultant, and a formal operator qualification card is issued by FRA consultant to employee. Staff found no exceptions.

3. Herzog administered the following documents and training to POLA RCL Supervisors:
  - a. Accident/Incident Investigation reporting - October 29, 2009.
  - b. Reasonable suspicion/sign symptoms of alcohol and drug influence, intoxication, and misuse -July 29, 2007. The next scheduled retraining is scheduled for summer 2010.
  - c. Operator/Conductor Training for FRA 219 Drug and Alcohol Training - August 12, 2008
  - d. Red Car Line Operating Rules - September 18, 2009.
  - e. Red Car Line Timetable #3 – October 30, 2009.
  - f. Operating/Conductor Training for FRA 218 Blue Signal Protection of Workers - August 18, 2008.
  - g. Operator/Conductor Training for Blue Flag Signal Protection - December 2009
  - h. Personal Safety Herzog Employee Manual – issued at time of employment.
  - i. Personal Protective Equipment Training – August 8, 2010
  - j. System Security Awareness on July 22, 2010
  - k. Forklift Training – August 6, 2010

Staff found no exceptions

4. Herzog administered the following documents and training to POLA RCL Mechanical:
  - a. Accident/Incident Investigation reporting - October 29, 2009
  - b. Operating/Conductor Training for FRA 218 Blue Signal Protection of Workers - August 18, 2008
  - c. Red Car Line Operating Rules - September 18, 2009
  - d. Red Car Line Timetable #3 – October 30, 2009

- e. Operator/Conductor Training for Blue Flag Signal Protection - December 2009
- f. Handling Hazardous Material including disposal, spill prevention & response on
- g. Personal protective equipment training - August 8, 2010.

Staff found no exceptions.

- 5. On July 23, 2010 Herzog issued to all POLA RCL employees the recently revised Herzog Transit Services' Drug and Alcohol Abuse Program and Policy effective date 2010. POLA RCL employee signed in acknowledgment of receipt. The Drug and Alcohol Abuse Program and Policy was revised due to POLA RCL organizational changes only. Staff found no exceptions.
- 6. All POLA RCL supervisors were given? the Reasonable suspicion/sign symptoms of alcohol and drug influence, intoxication, and misuse on July 29, 2007. The next scheduled retraining is scheduled for summer 2010. Staff found no exceptions.

Recommendations:

None.

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>9</b>	Configuration Management System Modification Review/Approval Process	
Review Date	8/13/10	Department	Management
Reviewers	Joey Bigornia	Persons Contacted	Peter Kane – Director, Safety & Compliance, Herzog Ruben Montenegro – Manager Streetcar Operation, Herzog Vincent C. Cipolla – FRA Certified Locomotive Engineers Instructor, Advance Railroad Concepts Daveeta Woodrum

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Sections 15 and 18
3. POLA SOP OP-002 (Configuration Management)

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Configuration Management System Modification Review/Approval Process**

Conduct the necessary interviews and review appropriate documentation prepared during the last three years to determine if:

1. There have been any changes made to the system (vehicles, facilities, or property) since 2007.
2. POLA RCL is in compliance with the GO-164D safety certification process for major projects.
3. The changes or improvements were reviewed, approved, and filed following the process outlined in SOP OP-002.
4. As built plans and specifications records are permanently maintained at POLA RCL.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. There have been no changes to the POLA RCL system since 2007. The last modification was performed in 2005 which changed all existing Axle Bearings to Roller Axle Bearing on the three streetcars.

2. The Axle Bearing Change Proposal was initiated in September 3, 2003 and completed February 15, 2005 in compliance with GO164-D safety certification process for major projects.
3. The Change Proposal document contained and identified all necessary descriptions and followed SOP OP-002 process requirements.
4. The Final Plans, as built, and specification records are permanently maintained at Herzog's offices.

Recommendations:

None

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>10</b>	Employee and Contractor Safety Program	
Review Date	8/12/10	Department	Operations
Reviewers	Claudia Lam	Persons Contacted	Ruben Montenegro – Manager Peter Kane – Director Safety

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Sections 19 and 22

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Employee and Contractor Safety Program**

Conduct the necessary interviews and review appropriate documentation prepared during the last three years to determine if:

1. Any employee safety hazards were reported during the past 3 years.
2. POLA management implemented corrective actions on any reported employee safety hazards.
3. Contractors were trained before working on the POLA RCL.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. Staff interviewed the POLA RCL personnel and reviewed the following three records:
  - Red Car Line Incident Report (2007- 2010)
  - Red Car Line Equipment Defect Reports (2006-2010)
  - Near Miss Reports

The three reports contain the safety hazards reported by employees. Herzog resolved most of the reported hazards within a few hours the same day when it was reported.

2. POLA management has recently created a tracking matrix which tracks all the corrective actions on any reported safety hazards. Based on the documents reviewed, Herzog resolved most of the corrective actions within a few hours the same day hazards were reported.
3. Before contractors or visitors work on or visit POLA RCL, POLA management provides the safety briefing which covers: Blue Flag Protection, OCS Safety, Tripping Hazard, and Other Safety. At the end of the briefing, contractors/visitors are required to sign on the training sheet to document they have received the training. The training sheet/material is called Port

Of Los Angeles Waterfront Red Car Line Employees and Visitors Sign-in Sheet.

Recommendations:

None

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>11</b>	Hazardous Materials Program and Procurement	
Review Date	8/13/10	Department	Operations, Management
Reviewers	Joey Bigornia	Persons Contacted	Peter Kane – Director, Safety & Compliance Ruben Montenegro – Manager Streetcar Operation Vincent C. Cipolla – FRA Certified Locomotive Engineers Instructor Doug Ward – Streetcar Mechanic

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Section 20 and 23
3. POLA RCL SOP OP-001
4. POLA RCL SOP OP-003

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Hazardous Materials Program and Procurement**

Conduct the necessary interviews and review appropriate documentation prepared during the last three years to determine if:

1. A list of hazardous materials used or stored in the system has been developed.
2. Hazardous materials are being monitored by periodic inspections and status reports.
3. A file exists which contains a complete and accurate Material Safety Data Sheet (MSDS) for each procurement of hazardous chemicals used in the workplace.
4. MSDS files are in conformance with SOP OP-001 by reviewing at least 2 MSDS records.
5. There has been a Hazardous Material Incident reported during the past 12 months and verify if handling of the incident was in conformance with the SOP OP-003 by reviewing at least 1 record (if any).

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. Waterfront Red Car Line Maintenance Bulletin No. 2 Material Data Safety Sheets identifies 122 chemical products currently being use.

2. Hazardous Materials are monitored monthly by the Port of Los Angeles Facilities Inspection Checklist parts B (Fire Safety), D (Chemical Safety), E (Compressed Gases), and G (Hazardous Waste) and inspection reports are filed at MSO's office.
3. See No. 1 above.
4. Staff reviewed the following MSDS records:
  - a. Compressed Gasses, N.O.S., Praxair: Page Nos. C-34 to 43
  - b. Liquidwood A, Abatron, Inc. Page No. L-18
  - c. Molykote 55 O-Ring Lubricant, Dow Corning: Page Nos. M-23 to 29.Staff found no exceptions.
5. Staff found there has not been a Hazardous Material Incident for July 2009-July 2010.

Recommendations:

None

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>12</b>	Track Inspection	
Review Date	8/4/10	Department	PHL Track Maintenance
Reviewers	John Madriaga	Persons Contacted	James Connelly – Manager Track Maintenance

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Section 11.2
3. 49 CFR Part 213, Track Safety Standards

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Track Inspection**

Conduct the necessary interviews and physically inspect the POLA RCL track and switches for compliance to the reference criteria.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. Staff observed the following maintenance issues at the noted Mile Posts (MP)
  - a. MP 6.6 - anglebar w/ torch cut bolt hole
  - b. MP 6.13- loose bolts
  - c. MP 5.43, sw#23- insulation out of #1 rod
  - d. MP 5.3 –non insulated gage rod next to crossing (several)
  - e. MP 5.1- torch cut transit clip sw#22
  - f. MP 5.1 derail stand not operational
  - g. MP 4.62 bond strand cut

Recommendations:

POLA RCL should replace and/or repair the mentioned non-compliant items in accordance with the POLA RCL SSPP track maintenance requirements referencing 49 CFR Part 213, Track Safety Standards.



**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>13</b>	Signal Inspection and Records Review	
Review Date	8/24/10	Department	Signal Maintenance
Reviewers	Thomas Govea	Persons Contacted	Ruben Montenegro – Manager Jesse Marquez – Balfour Beatty Signal Supervisor

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Section 11.3
3. 49 CFR Part 234, Grade Crossing Signal System Safety
4. 49 CFR Part 236, Signal and Train Control Systems Safety Standards

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Signal Inspection and Records Review**

Conduct the necessary interviews, review appropriate documentation prepared during the last three years, and physically inspect POLA RCL signals to determine if:

1. POLA RCL signals are maintained in accordance with the reference criteria
2. Balfour Beatty records indicate proper frequency of maintenance in accordance with the reference criteria
3. Herzog records indicate quarterly inspection of Balfour Beatty records in accordance with SSPP Section 11.3

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. On August 4, 2010, staff observed crossings and warning devices operations, maintenance, and compliances at all locations. No exceptions noted.
2. Staff reviewed the Signal Test/Maintenance Records on August 24, 2010 as follows:
  - a. O'Farrell Street Pedestrian Crossing MP 4.89, DOT 747789E. Records provided dated September 2009 to August 2010. No exceptions noted.
  - b. 1st Street MP 5.1, DOT 747789E. The signal test/maintenance records do not indicate full compliance with CFR 234.255 (c), CFR part 234.273, and POLA RCL SSPP section 11.3.
  - c. 5th Street MP 5.3 DOT 747790Y. The signal test/maintenance records do not

indicate full compliance with CFR part 234.267, CFR part 234.273, and POLA RCL SSPP section 11.3.

- d. 6th Street MP 5.4 DOT 747791F. The signal test/maintenance records do not indicate full compliance with CFR 234.253 parts (a) and (b), CFR 234.265, CFR part 234.273, and POLA RCL SSPP section 11.3.

Recommendations:

1. POLA RCL should comply with CFR 234.253, 234.255, 234.265, 234.267 by conducting the required tests and inspections.
2. POLA RCL should comply with CFR 234.273 and POLA RCL SSPP section 11.3 by maintaining and reviewing records as required.

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>14</b>	Rolling Stock Inspection and Records Review	
Review Date	8/24/10	Department	Equipment / Rolling Stock
Reviewers	Michael Borer	Persons Contacted	Ruben Montenegro

**REFERENCE CRITERIA**

1. CPUC General Order 164-D
2. Port of Los Angeles Waterfront Red Car Line (POLA RCL) System Safety Program Plan Section 11.1
3. POLA RCL Vehicle Maintenance Manual

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Rolling Stock Inspection and Records Review**

Conduct the necessary interviews, review appropriate documentation prepared during the last three years, and physically inspect rolling stock to determine if:

1. Rolling stock is maintained in accordance with the reference criteria with regard to vehicle condition and frequency of maintenance.
2. Routine and periodic preventive maintenance is being conducted according to section 1.2 of the Maintenance Manual.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. Herzog informed staff that Car No. 1058 is a spare train for when Car No 500 or 501 is undergoing a long-term inspection such as the Annual.
2. Staff reviewed Vehicle Inspection (daily) records for Car No 500 and 501 dated January 2008 – December 2009. Records indicate that Herzog inspected the streetcars at the required maintenance intervals and that Herzog repaired any defects found in a timely manner.
3. Daily inspection records filled out by the operator before revenue for all three cars had some conflicting info. They would show the lights, brakes, air etc. ok and then in the commit box show them as a defect. Staff suggests modification of the checklist to avoid confusion.
4. Staff reviewed Vehicle Inspection (30-day, quarterly, and 6-month) records for Car No. 500, 501 and 1058 dated January 2008 – December 2009. Records indicate that Herzog inspected the streetcars at the required maintenance interval and repaired any defects found in a

timely manner.

5. The Annual Inspections are staggered since two-cars are always required for revenue service.
6. All Herzog rolling stock is excellently maintained.

Recommendations:

none

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>15</b>	Overhead Catenary System Inspection	
Review Date	8/5/10	Department	OCS Maintenance
Reviewers	Steve Intably	Persons Contacted	Shaun Zor – Mass Electric

**REFERENCE CRITERIA**

1. CPUC General Order 95
2. CPUC General Order 128

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Overhead Catenary System Inspection**

Physically inspect the overhead catenary system to determine POLA RCL compliance to the reference criteria.

**FINDINGS AND RECOMMENDATIONS**

Findings:

Clearances between the overhead conductors and tops of rails averaged over 22.5 feet. There were instances that the clearance was less than 22.5 feet. The smallest clearance was measured to be 22 feet 1 inches. The minimum clearance for tracks of railroad which transport freight cars is 22.5 feet. POLA RCL track is no longer used to transport freight. POLA RCL voltage does not exceed 1000 volts. Under these conditions, the minimum clearance required by General Order 95 for POLA RCL track is 18 feet.

Recommendations:

none

**2010 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR  
THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE**

<b>Checklist</b>	<b>16</b>	Operational Observation – CPUC Inspector	
Review Date	8/27/10	Department	Operations
Reviewers	Don Filippi	Persons Contacted	Ruben Montenegro – Manager

**REFERENCE CRITERIA**

1. POLA RCL Operating Rules
2. POLA RCL Speed Table
3. POLA RCL General Orders
4. POLA RCL Daily Orders
5. POLA RCL Special Instructions Section 12

**ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION**

**Operational Observation – CPUC Inspector**

Observe train operators in normal duty and determine if:

1. POLA RCL is operated in accordance with the reference criteria.
2. POLA RCL is operated in accordance with the Speed Table.
3. POLA RCL operators are following Daily Orders.
4. POLA RCL operators are following special instructions at selected grade crossings according to section 12 of POLA RCL Special Instructions Manual.

**FINDINGS AND RECOMMENDATIONS**

Findings:

1. Staff observed all elements of this checklist and found that the POLA RCL operates in full compliance of all rules, regulations, and operating procedures.
2. Staff observed three train operators travel over the entire route and found no exceptions with POLA RCL operating procedures.
3. All train operators had their licenses and their certification was current.
4. Staff observed pre-trip inspections and a pre-revenue safety briefing

Recommendations:

None