TRIENNIAL ON-SITE SAFETY AUDIT OF THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

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FINAL REPORT

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Consumer Protection and Safety Division

2004

TRIENNIAL ON-SITE SAFETY AUDIT OF

THE PORT OF LOS ANGELES

WATERFRONT RED CAR LINE

Rail Transit Safety Program

ACKNOWLEDGEMENT

The California Public Utilities Commission's Rail Transit Safety Section staff conducted this system safety program audit. Staff members directly responsible for conducting audit activities include:

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1. EXECUTIVE SUMMARY

The Rail Transit Safety Section staff (staff) of the California Public Utilities Commission's (Commission) Consumer Protection and Safety Division conducted the first triennial, on-site, safety audit of the Port of Los Angeles Waterfront Red Car Line (POLA RCL) from August 11 to August 19, 2004. The on-site audit was preceded by a pre-audit conference with POLA RCL personnel, on Monday, August 16, 2004.[1] A post-audit conference, also attended by POLA RCL personnel, was held on Thursday, August 19, 2004.

The staff audited four POLA RCL departments on 10 separate subjects using specific criteria (checklists) and made six recommendations. The audit results indicate that POLA RCL has been deligent in following its own System Safety Program Plan (SSPP) to implement overall safety of the system. However, the audit results also identified areas where additional improvements could be made to further improve POLA RCL safety program. The areas of most concern were documentation and record keeping. POLA RCL has not reviewed its SSPP for revision during the past 12 months as specified in the current SSPP (See Checklist 1). POLA RCL has not developed a formal facility inspection form for the RCL facilities that are subject to routine maintenance (See Checklist 3). The signal and overhead contact system (OCS) inspection and maintenance for POLA RCL has been contracted out. POLA RCL did not have copies of the inspection and maintenance records (See Checklist 3). POLA RCL vehicle maintenance inspection cycles identified within the SSPP did not match the actual inspection practices (See Checklist 3). POLA RCL did not follow its own standard operationg procedure (SOP OP-002), which requires a formal approval process, by not documenting the changes being made to their vehicles – drive axle bearing improvement project (See Checklist 6).

The introduction of this report is stated in Section 2. The background, with POLA RCL rail system description is in Section 3. Sections 4 and 5 respectively depict 2004 audit procedure and findings and recommendations. The Acronyms are listed in Appendix A. POLA RCL 2004 Triennial Safety Audit Checklist Index, Recommendations List and the Checklists are respectively written in Appendices B, C, and D.

[1] Audit activities covering three checklists were conducted before the pre-audit conference.

2. INTRODUCTION

The Commission's GO 164-C, Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems, and the Federal Transit Administration's (FTA) Final Rule, 49 CFR Part 659 require the staff to perform triennial, on-site, safety audits of each transit agency. The purpose of these audits is to verify compliance with, and evaluate the effectiveness of, each rail transit agency's SSPP.

In July 2004, staff sent a letter to POLA RCL General Manager, advising him that the on site triennial safety audit would be scheduled between August 16 and August 20, 2004. This letter included ten checklists that would serve as the basis for the audit.

The on-site audit was preceded by a pre-audit meeting with POLA RCL personnel on Monday, August 16, 2004. Audits covering three checklists were conducted on August 11 and 12, 2004, due to staff scheduling conflicts. A post-audit meeting, also attended by POLA RCL personnel, was held on Thursday, August 19, 2004. At the post-audit conference, staff provided the POLA RCL representatives a verbal synopsis of the preliminary findings and recommendations from the 10 checklists. Staff explained that a preliminary draft audit report would be prepared for POLA RCL review and comments.

3. BACKGROUND

POLA RCL is a tourist oriented historic streetcar system. The system mimics the Pacific Electric Red Cars (PE Cars) of the 1920's era. The system utilizes one restored 1000 class PE Car and two replicated 500 class PE Cars. The POLA RCL came to life as a part of the Port of Los Angeles' San Pedro Waterfront Development Plan. The Port of Los Angeles solely funded the construction and operation cost. The system was built on existing freight track. The service between freight trains and POLA RCL is temporally separated – freight and passenger service hours do not overlap – according to Federal Railroad Administration rules. Operations and maintenance of the system has been contracted out to Herzog Transit Services. POLA RCL began its revenue operation on July 19, 2003.

<u>POLA RCL System Description</u>

POLA RCL rail system consists of 1.5 miles of track, three historic streetcars, four stations, and a maintenance facility. The system connects World Cruise Terminal, Downtown San Pedro, Ports O'Call Village, and a remote parking lot. Extension of this line to the nearby Cabrillo Beach is in the conceptual planning stage. Normal operating hours from Friday to Monday (weekend operation) are from 10 AM to 6 PM. The average weekend (4 days) ridership of the system is about 2,300 during the summer and 900 during the winter.

4. AUDIT PROCEDURE

Staff conducted the audit in accordance with its Procedure for Performing Triennial Safety Audits of Rail Transit Systems, Rail Transit Safety Section 4. Staff developed 10 checklists to evaluate the various departments with system safety responsibilities, using FTA and American Public Transit Association guidelines and the staff's knowledge of the transit system. The list of the 10 checklists is included in Appendix B.

Each checklist identifies the safety-related elements and characteristics that staff audited, POLA RCL reference documents that established the acceptance requirements, and the method that staff used for evaluating compliance with the requirements. The methods used included:

- discussions with POLA RCL management
- reviews of procedures and records
- interviews with managers and supervisors

The audit checklists concentrated on requirements that affect the safety of train operations, and that are known or believed to be important to reducing safety hazards and preventing accidents.

5. FINDINGS AND RECOMMENDATIONS

Staff audited four POLA RCL departments with 10 checklists. Generally, staff found that POLA RCL has a comprehensive SSPP and is effective in carrying out that plan. The results indicate that POLA RCL management is giving full attention to its system safety program. Staff recorded the audited findings for each element/characteristic under the Results/Comments heading on each of the 10 checklists. Appendices B, C, and D depict the POLA RCL 2004 Triennial Audit Checklist Index, Recommendation List, and Checklists.

I. General Manager

The POLA RCL General Manager has the overall management responsibility for all of the POLA RCL departments, including the authority and responsibility for System Safety. The General Manager also sets and executes the operational and maintenance budget.

Findings – Conforming Conditions:

1. The General Manager has constant information on day-to-day operations (See Checklist 1). He meets with the Manager of Streetcar Operation (MSO) almost everyday to discuss operations, system safety, maintenance, and expenditures (See Checklist 1).

2. The General Manager receives all incident reports, near miss reports, and monthly reports that analyze statistical trends (See Checklist 1).

Findings – Non-Conforming Conditions:

1. POLA RCL has not reviewed its SSPP for revision in the past 12 months as specified in the SSPP (See Checklist 1).

Recommendations:

1. POLA RCL should review its SSPP and make any needed updates (See Checklist 1).

II. Operations

Herzog Transit Services (Herzog) is contracted to operate the system. The MSO has overall responsibility for operations.

Findings - Conforming Conditions:

1. Rulebook and operating procedures were reviewed for revision in the past year. Rulebook and operating procedures revisions are scheduled to be completed by January 2005 (See Checklist 4).
2. Surreptitious rule compliance checks were conducted for all of the operators during the past 12 months (See Checklist 4).
3. All operators' records of the random drug checks, written exam results, and FRA audit results for the operator qualification were stored in personnel file (See Checklist 4).
4. All operators' FRA certification renewal is due on October 11, 2004 and refresher training is scheduled (See Checklist 4).

Findings – Non-Conforming Conditions:

None

Comments:

1. Personnel files could be made easier to track the employees' training status by including all training records under each operators file, rather than just listing the operator's names under each training record (See Checklist 4).

Recommendations:

None

III. Maintenance

Herzog is contracted to maintain the vehicles and facilities. Mass Electric (ME) is contracted to maintain the OCS. Pacific Harbor Line (PHL) is contracted to maintain the signals and track. POLA RCL shares the track with PHL, a freight operator, temporally separated according to FRA rules. Herzog and PHL have mutual agreement that, in an emergency, either of the two parties can perform track repairs. The MSO has overall responsibility on the system maintenance and contractor coordination.

Findings - Conforming Conditions:

1. Herzog inspected station lightings and platforms routinely (See Checklist 3).
2. Switches were inspected at the required maintenance interval and any defects found were repaired in a timely manner (See Checklist 3).
3. Track was inspected at the required maintenance interval via hi-rail and walking. Defects found during the inspection were repaired in a timely manner (See Checklist 3).
4. Vehicles were inspected at the required maintenance interval and any defects found were repaired in a timely manner (See Checklist 3).
5. Plans, as built, and specifications are maintained by Herzog at POLA RCL maintenance facility (See Checklist 6).

Findings – Non-Conforming Conditions:

1. A formal facility inspection form, for the POLA RCL facilities subject to routine maintenance, has not been developed as it was specified in the SSPP (See Checklist 3).
2. Signal inspection records (inspection performed by PHL) were not available for review at POLA RCL maintenance office since the records are maintained by the PHL (See Checklist 3).
3. OCS inspection records (inspection performed by ME) were not available for review at POLA RCL maintenance office since the records are maintained by ME. GO 143-B, Section 14.06 *Traction Power System Inspections and Records* requires the OCS inspection records to be kept on-file for four years (See Checklist 3).
4. Vehicle inspection records (inspection performed by Herzog) for the 30-day, 90-day, and annual streetcar inspection were not available for review (See Checklist 3).
5. The 30-day, 90-day, and annual streetcar inspection elements are being checked at the daily inspection (See Checklist 3).
6. POLA RCL Manager of Maintenance stated that they followed SOP OP-002 for the drive axle bearing improvement project; however, detailed documentation for the review and approval process for the project was not available for review (See Checklist 6).

Recommendations:

1. POLA RCL should develop a formal facility inspection form for the facilities that are subjected to routine maintenance (See Checklist 3).

2. POLA RCL should maintain the signal inspection records at POLA RCL maintenance office for staff review (See Checklist 3).
3. POLA RCL should maintain the OCS inspection records at POLA RCL maintenance office for staff review (See Checklist 3).
4. POLA RCL should revise the vehicle maintenance inspection program currently identified in the SSPP to reflect actual inspection practices (See Checklist 3).
5. POLA RCL should follow its own Configuration Management Standard Operating Procedure (SOP OP-002) by documenting changes made to the system (See Checklist 6).

IV. Safety

The MSO has overall system safety responsibilities. The General Manager oversees the system safety by having meetings with the MSO and reviewing/analyzing the safety critical reports that the MSO submits periodically.

Findings - Conforming Conditions:

1. Emergency response training drills were conducted in September 2002 and were attended by all relevant agencies. The next scheduled emergency response training drill will be in September 2004 (See Checklist 2).
2. Emergency Responder's Training Bulletin, dated 3/27/2003, was updated following the September 2002 training (See Checklist 2).
3. Emergency responders were given right-of-way training on the same dates of the emergency response training drills (See Checklist 2).
4. MSDS were properly filed in a binder at the POLA RCL maintenance office (See Checklist 5).
5. The Port of Los Angeles Risk Management Department Facility Inspection Checklist, Section D *Chemical Safety*, ensures that hazardous materials are being monitored. The Safety Engineer from the Port of Los Angeles performs the inspection on a monthly basis (See Checklist 5).
6. MSDS files were prepared and stored in conformance with SOP OP-001 (HazMat) (See Checklist 5).
7. There were no hazardous material incidents at POLA RCL for the past 12 months (See Checklist 5).
8. POLA RCL uses appropriate forms/methods to document and report safety hazards (See Checklist 7).
9. There were no employee safety hazards or incidents reported during the past 12 months (See Checklist 7).
10. Contractors were trained prior to working on the POLA RCL system: Trackworks in Electrified Territory training was given to all contractor employees, a total of 12 individuals (See Checklist 7).

11. Monthly accident reports have been submitted to staff from August 2003 to present. No accident was reported since the POLA RCL began operation in July 2003 (See Checklists 1 and 9).
12. Near Miss Reports have been reported, recorded, and tracked since April 2004 (See Checklist 9). POLA RCL has evaluated each Near Miss Report and is taking action to reduce the number of near misses.
13. Vehicle maintenance data including defects and deficiencies found during revenue service is being entered into the Management Information System database. Data is being analyzed for trends including mechanical failures (See Checklist 9).
14. POLA RCL performed the internal safety audit according to the SSPP. Global Rail Services (GRS) performed the internal audit for POLA RCL from June 24 to 28, 2004. GRS looked at 5 APTA checklists and had many recommendations (See Checklist 10).
15. POLA RCL is preparing plans and schedules to address the internal safety audit recommendations (See Checklist 10).
16. POLA RCL has developed an Internal Safety Audit plan, which identifies the 15 APTA elements that will be reviewed within the 3-year process (See Checklist 10).
17. POLA RCL submitted a summary of internal safety audit findings and recommendations to the staff for review (See Checklist 10).

Findings – Non-Conforming Conditions:

None

Comments:

1. A table of contents cover sheet, listing the MSDS for products currently in use, should be created for the MSDS binder. The table of content sheet should list an effective date for ease of identifying any updates that have been made to the contents of the MSDS binder (See Checklist 5).
2. POLA RCL should submit a corrective action plan for all the recommendations that resulted from the internal safety audit. The corrective action plan should include a schedule to close the recommendations in a timely manner (See Checklist 10).

Recommendations:

None

V. Security

The Port of Los Angeles Police Department (POLA PD) is responsible for establishing security policies, security design criteria, administering and overseeing the law enforcement efforts at the POLA RCL. POLA PD has one liaison officer assigned to the POLA RCL area.

Findings – Conforming Conditions

1. POLA PD has assessed the POLA RCL for threat and vulnerability (See Checklist 8).
2. POLA RCL operators are the eyes and ears of system security. They report any incident to POLA PD (See Checklist 8). The MSO briefs the crews about Department of Homeland Security bulletins and suggested measures every week (See Checklists 4 and 8).
3. POLA RCL submits Near Miss Report to POLA PD. POLA PD reviews and assesses these reports monthly and takes appropriate actions to mitigate problems (See Checklist 8).

Findings Non-Conforming Conditions:

None

Recommendations:

None

APPENDICES

A. Acronyms List

B. POLA RCL 2004 Triennial Safety Audit Checklist Index

C. POLA RCL 2004 Triennial Safety Audit Recommendations List

D. POLA RCL 2004 Triennial Safety Audit Checklists

Appendix A

Acronyms List

Acronym	Meaning
AIP	Accident Investigation Plan
APTA	American Public Transportation Association
CFR	Code of Federal Regulations
CPUC	California Public Utilities Commission
DHS	Department of Homeland Security
FRA	Federal Railroad Administration
FTA	Federal Transportation Administration
GRS	Global Rail Services
GO	General Order
HazMat	Hazardous Material
LAFD	Los Angeles Fire Department
LAPD	Los Angeles Police Department
ME	Mass Electric
MIS	Management Information System
MOW	Maintenance of Way
MSDS	Material Safety Data Sheet
MSO	Manager of Streetcar Operation
NTSB	National Transportation Safety Board
OCS	Overhead Contact System
OP	Operations
PD	Police Department
PE Cars	Pacific Electric Red Cars
PHL	Pacific Harbor Line
POLA	Port of Los Angeles
RCL	Waterfront Red Car Line
RTSS	Rail Transit Safety Section (of CPUC)
SOP	Standard Operating Procedure
SSPP	System Safety Program Plan
TVA	Threat and Vulnerability Assessment

Appendix B

POLA RCL 2004 TRIENNIAL SAFETY AUDIT CHECKLIST INDEX

Checklist No.	Element/Characteristics
1	Authority and Responsibility for System Safety Program
2	Emergency Response Planning, Coordination, and Training
3	Facilities and Maintenance Inspection
4	Rules / Procedures, Training and Certification Review
5	Hazardous Material Programs
6	Configuration Management / System Modification Approval Process
7	Employee and Contractor Safety Program
8	Security
9	Accident and Safety Data Analysis
10	Internal Safety Audit Process

Appendix C

POLA RCL 2004 TRIENNIAL SAFETY AUDIT RECOMMENDATION LIST

No.	Recommendations	Checklist No.
1	POLA RCL should review its SSPP and make any needed updates.	1
2	POLA RCL should develop a formal facility inspection form for the facilities that are subjected to routine maintenance.	3
3	POLA RCL should maintain the signal inspection records at POLA RCL maintenance office for staff review.	3
4	POLA RCL should maintain the OCS inspection records at POLA RCL maintenance office for staff review.	3
5	POLA RCL should revise the vehicle maintenance inspection program currently identified in the SSPP to reflect actual inspection practices.	3
6	POLA RCL should follow its own Configuration Management Standard Operating Procedure (SOP OP-002) by documenting changes made to the system.	6

Appendix D

POLA RCL 2004 TRIENNIAL SAFETY AUDIT CHECKLISTS

(1 THROUGH 10)

2004 CPUC SYSTEM SAFETY AUDIT CHECKLIST FOR THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

Checklist No.	**1**	Persons Contacted
Date of Audit	**8/16/04**	Robert Henry, POLA RCL General Manager John Smatlak, POLA RCL Consultant Rafael Mejia-Lopez, Manager of Streetcar Operation
Auditors	**Robert Strauss**	
Department	**Management**	

REFERENCE CRITERIA

1. CPUC General Order 164-C
2. Port of Los Angeles (POLA) Waterfront Red Car Line (RCL) System Safety Program Plan Sections 1 though 6

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

AUTHORITY AND RESPONSIBILITY FOR SYSTEM SAFETY PROGRAM

Interview POLA RCL General Manager to determine:

1. The source, frequency, and depth of safety and security information provided to the General Manager.
2. The method the General Manager uses to monitor the proper implementation of the SSPP.
3. If the Goals identified in the SSPP have been achieved.
4. If the Objectives identified in the SSPP have been accomplished.
5. If the Organization Chart correctly represents the current POLA RCL structure.
6. If the SSPP has been reviewed for revision during the last 1-year period.

FINDINGS AND RECOMMENDATIONS

Findings:

1. The General Manager has constant information on day-to-day operations. The General Manager receives all incident reports, near miss reports, and monthly reports that analyze statistical trends. The General Manager also authorizes all expenditures, which includes information on maintenance and repair needs.
2. POLA contracts with Herzog to operate the trolley. There does not appear to be any issues or problems with communication between the entities. The General Manager meets with the Manager of Streetcar Operation almost everyday to discuss operations, system safety, maintenance, and expenditures.
3. POLA RCL has been operating “accident free” since it began revenue service.
4. POLA RCL hired a consulting company to perform an internal safety audit this year. The General Manager reviewed the audit and is responsible for implementing corrective actions for the reports recommendations.
5. POLA RCL’s SSPP has not been reviewed in the last year, although the General Manager stated a review is planned after the audit, in order to take advantage of information gained during the audit. Pending organizational changes will also be incorporated in the revision.

Recommendations:

1. POLA RCL should review its SSPP and make any needed updates.

2004 CPUC SYSTEM SAFETY AUDIT CHECKLIST FOR THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

Checklist No.	**2**	Persons Contacted
Date of Audit	**8/18/04**	Rafael Mejia-Lopez, Manager of Streetcar Operation David L. Garcia, Manager of Maintenance
Auditors	**Joey Bigornia**	
Department	**Safety**	

REFERENCE CRITERIA

1. CPUC General Order 164-C
2. POLA RCL SSPP Section 14
3. POLA RCL Emergency Responders Training Bulletin

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

EMERGENCY RESPONSE PLANNING, COORDINATION, TRAINING

Interview POLA RCL personnel to determine if:

1. Emergency Drills involving external agencies have been performed.
2. The drills were evaluated and any recommendations found were incorporated into the Emergency Responders Training Bulletin.
3. Emergency responders have received the required Right of Way Safety training.
4. Plans and schedules for future Emergency Drills (full scale and table top) have been established.

FINDINGS AND RECOMMENDATIONS

Findings:

1. Copies of sign-in sheets were reviewed to determine the external agencies that were involved in emergency training/drills. Emergency response training/drill was performed at the POLA Police Station on 9/10/02, and at Fire Station No. 12 on 9/13 & 9/20/2002. Agencies attendees for the emergency responders training were L.A. Port Police, L.A. Police Department – Harbor Division, L.A. Fire Department, Mass Electric, Herzog, National Transportation Safety Board, and CPUC.
2. Emergency Responder's Training Bulletin dated 3/27/2003 was updated following the 9/2002 emergency response training/drills. The bulletin contains a summary of evaluations and recommendations from the 9/2002 emergency response training/drills.
3. Copies of sign-in sheets for the emergency responders right-of-way training were reviewed. Training occurred on the same dates of the emergency responders training drills.
4. The last emergency response training/drill performed at POLA was on September 2002. The next scheduled drill is September 2004.

Recommendations:

None.

2004 CPUC SYSTEM SAFETY AUDIT CHECKLIST FOR THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

Checklist No.	**3**	Persons Contacted
Date of Audit	**August 18, 2004**	Rafael Mejia-Lopez, Manager of Streetcar Operation David L. Garcia, Manager of Maintenance
Auditors	**Joey Bigornia**	
Department	**Maintenance**	

REFERENCE CRITERIA

1. CPUC General Order 164-C
2. POLA RCL SSPP Sections 10 and 11
3. POLA RCL Maintenance Schedule
4. POLA RCL Vehicle Maintenance SOP

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

FACILITIES AND MAINTENANCE INSPECTION

Review Facilities and Wayside Inspection records to determine if:

1. POLA RCL has developed an inventory list that clearly identifies which facilities and wayside equipment are subject to routine inspections.
2. The identified facilities and wayside equipment are routinely inspected.
3. Future Facilities and Wayside inspections have been scheduled.

Interview the POLA RCL Maintenance Manager and review Maintenance records to determine if:

1. Vehicle maintenance inspections have been performed according to the RCL Maintenance Schedule.
2. Problems identified during the vehicle maintenance inspections have been addressed in a timely manner and properly documented.

FINDINGS AND RECOMMENDATIONS

Findings:

A. Facilities
   1. POLA RCL currently inspects all station lighting and platforms.
   2. Station lighting and platform inspections are currently recorded in a logbook, which identifies the date and corrective action if any.
   3. A formal facility inspection form, for the POLA RCL facilities subject to routine maintenance, has not been developed.

B. Wayside

1. Wayside equipment is subject to frequent inspections, which include: signal, switch, track and overhead contact systems.
2. The Pacific Harbor Line (PHL) performs signal inspections. Signal inspection records were not available for review at POLA RCL maintenance office since they are maintained by the PHL.
3. Switch inspection reports for Switch Nos. S23, S24 and S25 dated July 2003 – August 2004 were reviewed. Switches were inspected at the required maintenance interval and any defects found were repaired in a timely manner.
4. Track inspection reports dated July 16, 2003 – August 17, 2004 were reviewed. Track was inspected at the required maintenance interval via hi-rail and walking. Defects found during the inspection were repaired in a timely manner.
5. Overhead Contact System (OCS) inspections are performed by Mass Electric (ME). OCS inspections were not available for review at POLA RCL maintenance office since they are maintained by ME. GO 143-B, Section 14.06 Traction Power System Inspections and Records requires the OCS inspection records be kept on-file for four years.

C. Vehicle

1. Vehicle inspection (daily) records for Car No 501 and 1058 dated July 2003 – August 2004 were reviewed. Vehicles were inspected at the required maintenance interval and any defects found were repaired in a timely manner.
2. Vehicle Inspection records for the 30-day, 90-day, and annual were not available for review.
3. The 30-day, 90-day, and annual streetcar inspections are being checked at the daily inspection interval.

<u>Recommendations:</u>

1. POLA RCL should develop a formal facility inspection form for the facilities that are subjected to routine maintenance.
2. POLA RCL should maintain the signal inspection records at POLA RCL maintenance office for staff review.
3. POLA RCL should maintain the OCS inspection records at POLA RCL maintenance office for staff review.
4. POLA RCL should revise the vehicle maintenance inspection program currently identified in the SSPP to reflect actual inspection practices.

2004 CPUC SYSTEM SAFETY AUDIT CHECKLIST FOR THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

Checklist No.	**4**	Persons Contacted
Date of Audit	**8/17/04**	Rafael Mejia-Lopez, Manager of Streetcar Operation
Auditors	**Susan Feyl**	
Department	**Operations**	

REFERENCE CRITERIA

1. CPUC General Order 164-C
2. POLA RCL SSPP Sections 12 and 13
3. POLA RCL Rulebook
4. Herzog Program of Operational Tests and Inspections
5. Herzog 49 CFR Part 240 Qualification and Certification of Locomotive Engineers

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

RULES / PROCEDURES, TRAINING AND CERTIFICATION REVIEW

Interview the POLA RCL Manager of Streetcar Operations to determine if:

1. Rules and Procedures were reviewed for revision during the past 12 months.
2. Written Exams, Field Observations, and Audits were conducted, during the past 12 months, to monitor employees' conformance to the rules and procedures.
3. Records of each employee's training and certification have been evaluated during the past 12 months and that POLA RCL management is aware of each employee's need for "refresher" training and certification renewal.
4. POLA RCL has developed a re-training, new training, and certification renewal schedules for their employees.

FINDINGS AND RECOMMENDATIONS

Findings:

1. POLA RCL Rulebook and operational procedures were reviewed and evaluated by the MSO. MSO Orders and General Orders were issued to clarify the rules and procedures. The clarification of the rules and procedures will be incorporated into the rules and procedures revision scheduled in January 2005.
2. I reviewed files on all 5 operators. Rule compliance was checked surreptitiously according to Herzog form, Rule Compliance Checklist for the Red Car Line, which revealed where the improvements were needed. Random drug and alcohol checks were made. Also, 5 quizzes and 1 final exam results were stored for each operator in separate files. The FRA audits for the operator qualification were stored in the personnel file for each operator.
3. All operators were FRA-certified on the same date, renewal due on 10/11/04, so it is easy for management to track FRA certification renewal. Refresher training for certification renewal is scheduled.

4. On August 31, 2004, all operators will be given a surprise quiz. Based upon the results of this test, specific areas will be emphasized for each specific operator. Also, every Sunday the operators are briefed on the homeland security issues and suggested measures.

Comments:

Personnel files could be made easier to track the employees' training status by including all training records under each operators file, rather than just listing the operator's names under each training record.

Recommendations:

None.

2004 CPUC SYSTEM SAFETY AUDIT CHECKLIST FOR THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

Checklist No.	**5**	Persons Contacted
Date of Audit	**8/18/04**	Rafael Mejia-Lopez, Manager of Streetcar Operation David L. Garcia, Manager of Maintenance
Auditors	**Joey Bigornia**	
Department	**Safety**	

REFERENCE CRITERIA

1. CPUC General Order 164-C
2. POLA RCL SSPP Sections 20
3. POLA RCL Operating SOP OP-001 (MSDS)
4. POLA RCL Operating SOP OP-003 (HazMat)

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

HAZARDOUS MATERIAL PROGRAMS

Interview POLA RCL personnel 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 hazardous chemical 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. MSDS sheets are filed in a binder at the POLA RCL Maintenance Office.
2. MSDS book contains documentation for materials used at the worksite. Materials are grouped according to railroad lubricants, automotive lubricants, general lubricants, paint coatings, and household supplies.
3. The Port of Los Angeles Risk Management Department Facility Inspection Checklist, Section D *Chemical Safety*, ensures that hazardous materials are being monitored. The Safety Engineer performs the inspection on a monthly basis.
4. I reviewed MSDS sheets titled Amercoat 235 Clear, Identification Number DV235C00026 and Mobilith SHC220. The two MSDS product material sheets were prepared in accordance with SOP-OP-001.
5. There were no hazardous material incidents at POLA RCL for the past 12-months.

Comments:

A table of contents cover sheet, listing the MSDS for products currently in use, should be created for the MSDS binder. The table of content sheet should list an effective date for ease of identifying any updates that have been made to the contents of the MSDS binder.

Recommendations:

None.

2004 CPUC SYSTEM SAFETY AUDIT CHECKLIST FOR THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

Checklist No.	**6**	Persons Contacted
Date of Audit	**8/18/04**	Dave Garcia, Manager of Maintenance Bruce Heath, Herzog Consultant – Vehicle Maintenance
Auditors	**Susan Feyl**	
Department	**Maintenance**	

REFERENCE CRITERIA

1. CPUC General Order 164-C
2. POLA RCL SSPP Sections 15 and 18
3. POLA RCL Operating SOP OP-002 (Configuration Management)

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

CONFIGURATION MANAGEMENT/ SYSTEM MODIFICATION APPROVAL PROCESS

Interview POLA RCL personnel to determine if:

1. There have been any changes made to the system (vehicles, facilities, or property) during the past 12 months.
2. The changes or improvements were reviewed and approved following the process outlined in SOP OP-002.
3. The drive axle bearing improvements to the trucks of the vehicles were properly documented.
4. Plans, As Built, and Specifications records are maintained at a permanent location.

FINDINGS AND RECOMMENDATIONS

Findings:

1. The only major change to the POLA RCL system during the past 12 months has been the drive axle bearing improvements. The bearings and housings are being prepared and will be installed on the RCL cars in late 2004.
2. The Manager of Maintenance described the configuration management process being followed. These generally complied with the process detailed in the Standard Operating Procedure (SOP), but POLA RCL failed to document the process.
3. The Manager of Maintenance stated that the drive axle bearing improvements were proposed to the POLA RCL project manager, which included the reasons for the modification, cost, and time required in accordance with the SOP. However, no documentation on the proposal, review, and approval was available.
4. Plans, As Built, and Specifications records are maintained by Herzog at POLA RCL maintenance facility.

Recommendations:

1. POLA RCL should follow its own Configuration Management Standard Operating Procedure (SOP OP-002) by documenting changes made to the system.

2004 CPUC SYSTEM SAFETY AUDIT CHECKLIST FOR THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

Checklist No.	**7**	Persons Contacted
Date of Audit	**8/16/04**	Rafael Mejia-Lopez, Manager of Streetcar Operation
Auditors	**Susan Feyl**	
Department	**Safety**	

REFERENCE CRITERIA

1. CPUC General Order 164-C
2. POLA RCL SSPP Sections 19 and 22

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

EMPLOYEE AND CONTRACTOR SAFETY PROGRAM

Interview the POLA RCL Manager of Streetcar Operations to determine if:

1. An appropriate procedure and reporting form has been developed and periodically distributed to all employees to report safety hazards in the work place.
2. There were any employee safety hazards reported during the past 12 months.
3. POLA RCL management implemented corrective actions on reported employee safety hazards.
4. The contractors were trained before working on the POLA RCL system by reviewing the Contractor Safety Training records.

FINDINGS AND RECOMMENDATIONS

Findings:

1. POLA RCL uses a number of forms to document safety hazards. Prior to line operations, POLA RCL uses a section in the back of the Temporal Separation form to document line problems. After the train goes into operation, operators use the Passenger Count and Delay form to document anything that delays operations. The FRA accident/incident form is available for use; however, there hasn't been an accident/incident to make use of the form. POLA also employs narrative descriptions (reported to the MSO verbally) to describe extraordinary situations/safety hazards.
2. There were no employee safety hazards or incidents reported during the past 12 months.
3. Contractors are trained prior to working on the POLA system. Trackworks in Electrified Territory training has been given to all contractors, a total of 12 individuals. It is a computer-based class with pictures of special trackworks, characteristics of overhead contact system and electric hazards associated.

Recommendations:

None.

2004 CPUC SYSTEM SAFETY AUDIT CHECKLIST FOR THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

Checklist No.	**8**	Persons Contacted
Date of Audit	**8/11/04**	Bob Henry, POLA RCL Manager Rafael Mejia-Lopez, Manager of Streetcar Operation Michael Graychik, Lieutenant, Los Angeles Port Police
Auditors	**Anton Garabetian**	
Department	**Security**	

REFERENCE CRITERIA

1. CPUC General Order 164-C
2. POLA RCL SSPP Section 24
3. Los Angeles Port Police Waterfront Red Car Line System Security Plan
4. POLA RCL Emergency Responders Training Bulletin

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

SECURITY

Interview POLA RCL security personnel to determine if:

1. System Security assessment has been conducted to identify potential terrorist targets.
2. There are counter terrorism security measures currently in place.
3. Crime Reports have been generated, reviewed and assessed periodically.
4. The crime reports and the results of security assessment are distributed to POLA RCL management.

FINDINGS AND RECOMMENDATIONS

Findings:

1. The POLA Police Department (PD) handles security at POLA RCL. POLA PD has one member assigned to the RCL area. POLA PD responds to any security problem that is reported by RCL operations. If the security problem grows bigger, which can't be handled by the POLA PD, than LAPD is asked to intervene to restore order. POLA PD has assessed the RCL for threat vulnerability and rated it "low" for terrorist target. The Department of Homeland Security (DHS) threat level changes affect the categories for the threat vulnerability assessment (TVA) at POLA but not specifically at the RCL. POLA PD has been trained by RCL Operations about system familiarization.
2. The POLA RCL operators are the eyes and ears of security. They report any incident to POLA PD. The RCL Operations briefs the crews about DHS bulletins every week. The POLA PD has bomb-sniffing dogs that can be used incase of a suspicious packages on the system. POLA performs terrorist attack drill every two years, which includes the whole port and not specifically the RCL. Inspection of tracks is part of the drill.
3. POLA RCL generates Near Misses Report to POLA PD in case of public violations on the system. These reports are accumulated every month for assessment and review with POLA

PD. POLA PD takes appropriate actions to mitigate the violations. For example, because of repetitious public violations at 6th St grade crossing, POLA PD has been observing the grade crossing more closely and has issued many citations.

4. All the Near Miss Reports and the accumulated monthly reports are shared with the POLA RCL management.

Recommendations:

None

2004 CPUC SYSTEM SAFETY AUDIT CHECKLIST FOR THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

Checklist No.	**9**	Persons Contacted
Date of Audit	**8/12/04** **8/19/04**	Rafael Mejia-Lopez, Manager of Streetcar Operation David L. Garcia, Manager of Maintenance
Auditors	**Hani Moussa** **Joey Bigornia**	
Department	**Safety**	

REFERENCE CRITERIA

CPUC General Order 164-C
POLA RCL SSPP Sections 8 and 16
POLA RCL Accident/Incident Investigation Procedure

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

ACCIDENT AND SAFETY DATA ANALYSIS

Interview POLA RCL management to determine if:

1. Monthly accident reports have been submitted to the CPUC.
2. Accidents/Incidents that are reported, including near misses, are being investigated according to POLA RCL Accident Investigation Procedures.
3. Mitigation measures have been implemented to prevent a reoccurrence of an Accident/Incident in the future.

Interview POLA RCL management to determine:

1. What type of safety data is acquired and analyzed.
2. How the results of the safety data analysis are used to prevent accidents.
3. How well the Computerized Management Information System (MIS), as it was specified in the SSPP, has been implemented.

FINDINGS AND RECOMMENDATIONS

Findings:

1. Monthly accident reports have been submitted from August 2003 to present to the CPUC designated representative to POLA RCL.
2. No accident has been reported since the POLA Waterfront Red Car Line began operation back in July 2003. Near Miss Reports, prepared by the operator, have been reported, recorded, and tracked since April 2004. A Near Miss Report spreadsheet identifies each incident that POLA RCL can track in order to mitigate any safety concerns raised by their operators.
3. POLA RCL has evaluated each Near Miss Report and determined that a number of incidents are occurring at the 6th Street at-grade crossing. More police enforcement has been put in place since August 1st to potentially reduce the number of incidents immediately. POLA RCL

has decided, based on the Near Miss Reports, to relocate the approach circuit at the crossing as soon as funding becomes available.

4. Near Miss Reports are the only safety data acquired and analyzed by the POLA RCL Manager of Streetcar Operations.
5. Data from each Near Miss Report is entered into the computer then tracked by the POLA RCL Manager of Streetcar Operations. A summary spreadsheet is then prepared to identify crossings / areas of concern along the right-of-way that should be mitigated to prevent accidents. Results of the safety data analysis indicate the 6th Street at-grade crossing should be modified to prevent vehicles from going through the crossing while the gates are being lowered. Eighty near miss incidents have been recorded since April 2004.
6. Maintenance data including defects and deficiencies found during revenue service from Car Nos. 501 & 1058 is being entered into the Management Information System database. Data is being analyzed for trends including mechanical failures.

Recommendations:

None

2004 CPUC SYSTEM SAFETY AUDIT CHECKLIST FOR THE PORT OF LOS ANGELES WATERFRONT RED CAR LINE

Checklist No.	**10**	Persons Contacted
Date of Audit	**8/11/04**	Bob Henry, POLA RCL General Manager Rafael Mejia-Lopez, Manager of Streetcar Operation
Auditors	**Anton Garabetian**	
Department	**Safety**	

REFERENCE CRITERIA

CPUC General Order 164-C
POLA RCL SSPP Section 9

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

INTERNAL SAFETY AUDIT PROCESS

Interview POLA RCL personnel to determine if:

1. The Internal Safety Audit has been performed according to the SSPP.
2. The plans and schedules are in place to address the Internal Safety Audit recommendations.
3. A schedule has been developed which identifies when the 15 APTA elements will be reviewed within a 3-year process.
4. Internal Safety Audits have been properly documented and submitted to the CPUC on an annual basis prior to February 15th each year.

FINDINGS AND RECOMMENDATIONS

Findings:

1. The POLA RCL performed the internal safety audit according to the SSPP. The Global Rail Services (GRS) performed the internal audit for POLA RCL from June 24 to 28, 2004. GRS looked at 5 APTA checklists and had many recommendations.
2. POLA RCL is preparing plans and schedules to address the internal safety audit recommendations.
3. POLA RCL has developed a plan, which identifies the 15 APTA elements that will be reviewed within 3-year process.
4. POLA RCL submitted a summary of internal safety audit findings and recommendations to the CPUC staff for a review.

Comments:

1. POLA RCL should submit a corrective action plan for all the recommendations that resulted from internal safety audit. The corrective action plan should include a schedule to close the recommendations in a timely manner.

Recommendations:

None