2009
SAFETY REVIEW OF
NORTH COUNTY TRANSIT DISTRICT (NCTD)

RAIL TRANSIT SAFETY SECTION
RAIL TRANSIT AND CROSSINGS BRANCH
CONSUMER PROTECTION AND SAFETY DIVISION
CALIFORNIA PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102

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Final Report

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Consumer Protection and Safety Division

2009 SAFETY REVIEW OF
NORTH COUNTY TRANSIT DISTRICT (NCTD)

ACKNOWLEDGEMENT

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

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Jay Ellis – Operating Practices Inspector
Heidi Estrada – Associate Signal Inspector
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1. EXECUTIVE SUMMARY

The California Public Utilities Commission's (Commission) Consumer Protection and Safety Division (CPSD), Rail Transit Safety Section staff (staff), with assistance from the Railroad Operations Safety Branch staff (staff), conducted an on-site safety review of North County Transit District (NCTD) system safety program in April 2009.

The on-site review was preceded by a pre-review conference with NCTD personnel and maintenance contractors on April 27, 2009. Staff conducted the 2009 NCTD on-site safety review April 27-30, 2009, and focused on verifying the effective implementation of the system safety program plan.

Staff held a post-review conference with NCTD personnel and contractors following the on-site safety review on May 29, 2009. Staff provided NCTD personnel with a synopsis of the preliminary review findings and possible recommendations for corrective actions.

The review results indicate that NCTD has a comprehensive system safety program and has effectively implemented its System Safety Program Plan (SSPP). However, staff noted exceptions during the review, which are described in the Findings and Recommendations section of each checklist. Of the 32 checklists, staff made 14 recommendations for corrective action. The recommendations are distributed among the Engineering, Light Rail Vehicle Maintenance, Safety, Transportation, and Wayside Departments.

The Introduction for this report is presented in Section 2 and Section 3, Background, contains a description of the NCTD rail system. Section 4 describes the review procedure, and Section 5 provides the review findings and recommendations. The 2009 NCTD Safety Review Abbreviations 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 system plan at a minimum of once every three years. The purpose of this initial safety review is to verify compliance and evaluate the effectiveness of the rail transit agency's System Safety Program Plan (SSPP) and to assess the level of compliance with GO 164-D as well as other Commission and regulatory safety requirements. This is the first on-site safety review of NCTD since revenue service began on March 9, 2008.

Staff advised NCTD Chief Executive Officer by letter dated March 30, 2009 which included 32 checklists that served as the basis for review, of the Commission's safety review schedule for the week of April 27, 2009. Three of the 32 checklists outlined inspection of track, switches, signals, and light rail vehicles. The remaining 29 checklists focused on the verification and the effective implementation of the safety program plans.

Staff conducted a pre-review conference on April 27, 2009, with NCTD's department managers, chief of security, and NCTD's operations and maintenance contractors. On April 27-29, 2009, the Commission's Rail Operations Safety Branch (ROSB) Inspectors conducted inspections of NCTD's track and signals. ROSB Inspectors conducted vehicle inspections on April 27-29, 2009.

Staff conducted the on-site safety records review on April 27-30, 2009. At the conclusion of each review activity, staff provided NCTD personnel with a summary of preliminary findings and discussed any preliminary recommendations for corrective actions.

On May 29, 2009, staff conducted a post-review exit meeting with NCTD's Chief Executive Officer, department managers, and NCTD's operations and maintenance contractors. Staff provided the attendees a synopsis of the findings from the 32 checklists and discussed the need for corrective actions where applicable.

3. BACKGROUND

The San Diego North County Transit District (NCTD) was created by passage of Senate Bill 802 in 1975 and started operations as North County Transit District on July 1, 1976. The agency's responsibility is to plan, develop and implement a fixed route system throughout North County. The region is described as the San Diego County-Orange County border at the northern end, City of La Jolla at southern end, and from the western coast of the City of Oceanside to the City of Ramona at the eastern end. In June 1994, NCTD created San Diego Northern Railroad (SDNR) to operate the "Coaster" commuter rail which provides service from the City of Oceanside to downtown San Diego. SDNR is responsible for maintaining the San Diego rail subdivision, purchased in 1994, which extends from the San Diego County-Orange County border south to downtown San Diego for commuter rail service and extends from City of Oceanside to City of Escondido for Sprinter light rail service.

NCTD's jurisdiction is 1100 square miles serving a population of over 1.0 million. The Coaster and Sprinter combined railroad right of way is 82 miles.

In 2002, Senate Bill 1703 was signed into law consolidating the roles and responsibilities of San Diego Association of Governments (SANDAG) with the transit planning and construction responsibilities of North County Transit District (NCTD) and Metropolitan Transit Development Board (MTDB). The consolidation has put under one roof staff responsible for transit planning, engineering, construction, communications, and finance.

NCTD Sprinter Rail System Description

NCTD's Sprinter light rail system consists of 22 miles and operates through the cities of Oceanside, Vista, San Marcos, Escondido, and an unincorporated section of the County of San Diego. Sprinter revenue service began on March 9, 2008, and there are 15 light rail stations; the average ridership is 6,000 – 8,000 per day. The Escondido Transit Center Station and Vista Transit Center Station are the main transfer stations for light rail/bus connections and the Oceanside Transit Center Station provides service connections to Amtrak, Coaster Commuter Train, and NCTD's bus system. Revenue service runs from 4:00 a.m. to 9:00 p.m. seven days a week with 30-minute headways.

The Sprinter vehicles, manufactured by Siemens AG Germany, are equipped with direct drive diesel powered engines similar to a bus. NCTD has a total of 12 trains for their Sprinter system.

NCTD dispatches locally from the Sprinter Operations Facility in Escondido, California. The Sprinter is governed by a Centralized Train Control (CTC) signal system for the safe movement of all trains operating on the system including the Burlington Northern Santa Fe (BNSF) which provides scheduled freight service on the mainline during the Sprinter's non-revenue service hours.

Sprinter Train Stations

The Sprinter's fifteen stations are: Oceanside Transit Center Station, Coast Highway Station, Crouch Street Station, El Camino Real Station, Rancho Del Oro Station, College Station, Melrose Station, Vista Transit Center, Escondido Ave. Station, Buena Creek Station, Palomar Station, San Marcos Civic Center, California State University San Marcos, Nordahl Station, and Escondido Transit Center Station.

4. REVIEW PROCEDURE

Staff conducted the review in accordance with the Rail Transit Safety Section Procedure RTSS-4, *Procedure for Performing Triennial Safety Audits of Rail Transit Systems*. Staff developed thirty-two (32) checklists to cover various aspects of system safety responsibilities, based on Commission and FTA requirements, NCTD SSPP, safety related NCTD documents, and the staff's knowledge of the transit system. The 32 checklists are included in Appendix C.

Each checklist identifies safety-related elements and characteristics that staff reviewed or inspected. Each of the checklists also references Commission, NCTD, and other documents that establish the safety program requirements. The completed checklists include review findings, and recommendations if the review findings indicate non-compliance. The completed checklists may include comments and suggestions to improve NCTD's system safety program. The methods used to perform the review include:

- Discussions with NCTD 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 that the NCTD rail system has a comprehensive SSPP and has been effectively implementing the plan.

Review findings identify areas where changes should be made to further improve NCTD system safety program. The review results are derived from activities observed, documents reviewed, issues discussed with management, and inspections. Overall, the review result confirms that NCTD is in compliance with its SSPP. The review identified 13 recommendations from the 32 checklists. Following are the findings and recommendations for each checklist:

1. **Vehicle Maintenance Inspection**

   No findings of non-compliance; no recommendations.

2. **Track and Switch Inspection**

   Staff found the following non-compliant items:

   - One junction box cover at Control Point (CP) True and one junction box cover at CP Wye required additional ballast for a reasonable walkway as required by General Order 118 (GO 118).
   - At Coast Highway grade crossing (MP 100.3), additional ballast is required for a reasonable walkway as required by GO 118.

   Recommendation:

   1. NCTD should survey the entire mainline right-of-way to verify GO 118 reasonable walkway compliance.

3. **Gated Grade Crossings Warning Devices Inspection**

   No findings of non-compliance; no recommendations.

4. **Sprinter Operations Facilities: Yard and Mainline Operations**

   No findings of non-compliance; no recommendations.

5. **Track, Signals and Vital Relay Maintenance**

   No findings of non-compliance; no recommendations.

6. **Track and Signal Maintainer Program**

   No findings of non-compliance; no recommendations.

7. **Grade Crossing Equipment Maintenance**

   No findings of non-compliance; no recommendations.

8. **Accident / Incident Reporting and Investigation**

   No findings of non-compliance; no recommendations.

9. **Internal Safety Audit Program**

   No findings of non-compliance; no recommendations.

10. **Facilities Inspections**

    No findings of non-compliance; no recommendations.

11. **Train Operator and Dispatcher Training Program**

    Staff found the following non-compliant items:

    - Veolia did not implement a re-certification program for trainers.
    - Staff did not find documentation to show that Veolia gave its managers an annual rules exam.

Recommendation:

2. NCTD should verify Veolia develops and implements a re-certification program for Veolia managers responsible for training, rules compliance, yard movement, mainline operations, and overall Veolia operations as required by Sprinter Code Operating Rule 1.3.1, Rules, Regulations and Instructions, 49 Code of Federal Regulations (CFR) Part 240 Operations Testing Reference Guide for Train Operators, Testing Authorization pg. 3, Sprinter Light Rail Transit System, NCTD SSPP, Section 13 Training and Certification Review, pg. 37 and Veolia's internal training and recertification process.

12. **Light Rail Vehicle (LRV) Maintenance**

Staff found the following non-compliant items:

- Staff found that NCTD did not have preventative maintenance or inspection checks for the audible horns to maintain at 85 dB as required by General Order 143-B, Section 3.04.
- Staff found that some Employee Defect Repair Forms were signed by Veolia Train Operators but were missing ID numbers. Staff found that some checklist items in the Maximo generated calendar daily inspection work orders were missing some items compared to other forms. Staff brought this discrepancy to the attention of the Site General Manager and the exception is being resolved.

Recommendation:

3. Bombardier should include an inspection or preventative maintenance check of the horns to ensure that the audible level remains at or above 85 dB as required by General Order 143-B, Section 3.04.
4. Veolia should ensure that train operators record their ID numbers when filling out the Employee Defect Repair Forms as required by Veolia's Standard Operating Procedures.
5. Bombardier should ensure that the mileage and engine hour on calendar day inspections are filled consistently for tracking purposes in generating work order tasks through the Maximo database program as required by contractual requirements.

13. **LRV Maintenance Training Program**

No findings of non-compliance; no recommendations.

14. **Emergency Response Agency and Familiarization Program**

Staff found the following non-compliant item:

- NCTD did not formally approve and implement Sprinter's Emergency Response Plan (ERP). NCTD informally employs procedures from the ERP, but the plan is not yet available to all necessary stakeholders.

Recommendation:

6. NCTD should finalize and implement the Emergency Response Plan (ERP) as part of the emergency response process specified in NCTD SSPP Section 14.2.

15. **System Modification Review and Approval Process**

No findings of non-compliance; no recommendations.

16. **Safety Data Collection and Analysis**

Staff found the following non-compliant item:

- NCTD has a documented process for the collection and analysis of unsafe trends as stated in the System Safety Program Plan and reflected in the meeting minutes of the System Safety Review Committee (SSRC). SSRC minutes show that NCTD followed the process for the identification of safety issues which has resulted in recommendations that were tracked to completion. Near Misses or Close Calls and Dispatcher Logs are not routinely and formally discussed at the SSRC although Veolia Transportation does keep detailed and valuable records on its train operators emergency brake applications and unusual occurrences in its Dispatcher Logs. These contain data on locations vulnerable to trespassing or intrusions and vehicles driving around grade crossing gates.

Recommendation:

7. NCTD should expand the System Safety Review Committee scope to include safety data & unusual occurrences such as Train Operator Emergency Brake Application Reports and Dispatcher Logs collected by Veolia Transportation for analysis and mitigation of unsafe trends as required by NCTD SSPP Section 7, 15.4.1, and 16 (same recommendation for checklist #31).

17. **Interdepartmental and Interagency Coordination**

No findings of non-compliance; no recommendations.

18. **Configuration Management**

No findings of non-compliance; no recommendations.

19. **Employee Safety Program**

Staff found following non-compliant item:

NCTD recently added corrective action to the Transit America's Unusual Occurrence Report whereas the previous method for corrective action tracking was via the monthly Sprinter Operations Meeting minutes or the System Safety Review Committee Meeting Minutes. Schedules for corrective action are usually estimated as to start and completion dates by NCTD since the work is split between a number of contractors and it is difficult to establish a schedule for completion. There is no written procedure to track corrective actions but corrective actions are tracked to completion in both NCTD's Sprinter Incident Log and in the web-based TransitSafe program.

Recommendation:

8. NCTD should develop a written procedure to track corrective actions identified by Transit America's Unusual Occurrence Report per NCTD SSPP Section 16.3.

20. **Environmental Protection and Hazardous Material Program**

No findings of non-compliance; no recommendations.

21. **Drug and Alcohol Program**

No findings of non-compliance; no recommendations.

22. **Contractor Safety Program**

No findings of non-compliance; no recommendations.

23. **Procurement**

Staff found the following non-compliant item:

- Veolia/Bombardier are currently finalizing QA procedures as virtually all parts have been procured from either the OEM (Siemens) or a recommended supplier, usually local for consumables, to preserve vehicle warranty. Veolia/Bombardier uses the Siemens Maintenance Manual to identify parts and part numbers. At time of Safety Review, NCTD did not have a QA document to provide for Staff's review.

Recommendation:

9. NCTD should require Veolia to develop a written procurement procedure for NCTD approval based on NCTD SSPP Section 23.2 requirements.

24. **Hazard Management Program**

No findings of non-compliance; no recommendations.

25. **Calibration of Test Equipment**

Staff found the following non-compliant item:

- Bombardier Standard Operating Procedure (SOP) Document 000001 requires calibration status label affixed to new equipment. Staff found Bombardier is not affixing labels identifying calibration status (Last Calibration Date, Next Calibration Due Date) to new equipment.

Recommendation:

10. Bombardier should affix labels to new equipment identifying calibration status as required by Bombardier Standard Operating Procedure Document 000001.

26. **Power Switch Maintenance**

No findings of non-compliance; no recommendations.

27. **Bridge Inspections**

No findings of non-compliance; no recommendations.

28. **Hours of Service**

Staff found the following non-compliant item:

- Staff's review of Veolia and Bombardier records identified missing entries on time cards. A review of timecard showed the appearance of someone filling the missing information at a later date. The missing information did not result in any hours of service violations.

Recommendation:

11. NCTD should require Veolia/Bombardier to develop a formal process for hours of service logs to record every employee's hours of service eliminating blank entries on timesheets based on GO 143-B, Section 12.04 Hours of Service – Safety Sensitive Employee, Section 14.03 Operator Records, and Sprinter Code of Rules – Rule 1.17 Hours of Service.

29. **Safety Certification Plan**

Staff found the following non-compliant items:

- According to the Manager of Light Rail and based on SB1703, SANDAG will handle projects in the region including safety certification of all future projects. However, Sprinter's current SSPP does not include this information.
- The Sprinter SSPP Section 15.5 explains the history of Sprinter Project Safety Certification Plan. However the SSPP does not need to reflect the history of a project.

Recommendation

12. NCTD should revise the SSPP to include SB 1703 requirements and identify SANDAG's role for safety certification of all future Sprinter projects and revise SSPP Section 15.5 eliminating the safety certification project history.

30. **Unusual Occurrence Reports**

Staff found the following non-compliant item:

- NCTD has a documented process for the collection and analysis of unsafe trends as stated in the System Safety Program Plan and reflected in the meeting minutes of the System Safety Review Committee (SSRC). These minutes show that the CPUC designated rep to NCTD attended these meetings. SSRC minutes show that NCTD followed the process for the identification of safety issues and has issued recommendations that were tracked to completion. Near Misses or Close Calls and Dispatcher Logs are not routinely and formally discussed at the SSRC although Veolia Transportation does keep detailed and valuable records on its train operators emergency brake applications and unusual occurrences in its Dispatcher Logs. These contain data on locations vulnerable to trespassing or intrusions and vehicles driving around grade crossing gates.

Recommendation:

13. NCTD should expand System Safety Review Committee scope to include safety data & unusual occurrences such as Train Operator Emergency Brake Application Reports and Dispatcher Logs collected by Veolia Transportation for analysis and mitigation of unsafe trends as required by NCTD SSPP Section 7, 15.4.1, and 16 (Recommendation identical to Checklist #16).

31. **Rules Compliance and Procedures Review**

No findings of non-compliance; no recommendations.

32. **System Safety Program Plan Update, Control, and Implementation**

No findings of non-compliance; no recommendations.

APPENDICES

A. Abbreviations List
B. NCTD 2009 Safety Review Checklist Index
C. NCTD 2009 Safety Review Recommendations List
D. NCTD 2009 Safety Review Checklists

APPENDIX A
ABBREVIATIONS LIST

Acronym	Definition
CAP	Corrective Action Plan
CEO	Chief Executive Officer
CFR	Code of Federal Regulations
CPSD	Consumer Protection and Safety Division
CPUC	California Public Utilities Commission
FTA	Federal Transit Administration
GO	General Order
ISA	Internal Safety Audit
LRV	Light Rail Vehicle
MOU	Memorandum Of Understanding
NCTD	North County Transit District
SOF	Sprinter Operations Facilities
SOP	Standard Operating Procedure
SSPP	System Safety Program Plan
TASI	Transit America Services, Inc. – NCTD Contractor for Wayside Maintenance

APPENDIX B
2009 NCTD SAFETY REVIEW CHECKLIST INDEX

No.	Element / Characteristic	No.	Element / Characteristic
1	Light Rail Vehicle Inspection	17	Interdepartmental and Interagency Coordination
2	Track and Switch Inspection	18	Configuration Management
3	Grade Crossing Warning Devices	19	Employee Safety Program
4	Sprinter Operation Facilities: Yard and Mainline Operations	20	Environmental Protection and Hazardous Material Program
5	Track, Signals and Vital Relay Maintenance	21	Drug and Alcohol Policy Program
6	Track & Signal Maintainer Training Program	22	Contractor Safety Program
7	Grade Crossing Equipment Maintenance	23	Procurement
8	Accident/Incident Reporting & Investigation	24	Hazard Management Program
9	Internal Safety Audit Program	25	Calibration of Test Equipment
10	Facilities Inspections	26	Power Switch Maintenance
11	Train Operator and Dispatcher Training Program	27	Bridge Inspection
12	Light Rail Vehicle (LRV) Maintenance	28	Hours of Service Records
13	LRV Maintenance Training Program	29	Safety Certification Program
14	Emergency Response Agency Familiarization Program	30	Unusual Occurrence Reports
15	System Modification Review and Approval Process	31	Rules Compliance and Procedures Review
16	Safety Data Collection and Analysis	32	System Safety Program Plan Update, Control, and Implementation

APPENDIX C

2009 NCTD SAFETY REVIEW RECOMMENDATIONS LIST

No.	Recommendation	Checklist No.
1	NCTD should survey the entire mainline right-of-way to verify GO 118 reasonable walkway compliance.	2
2	NCTD should verify Veolia develops and implements a re-certification program for Veolia Manager's responsible for training, rules compliance, yard movement, mainline operations, and overall Veolia operations as required by Sprinter Code Operating Rule 1.3.1, Rules, Regulations and Instructions, 49 Code of Federal Regulations (CFR) Part 240 Operations Testing Reference Guide for Train Operators, Testing Authorization pg.3, Sprinter Light Rail Transit System, NCTD SSPP Section 13 Training and Certification Review, pg.37 and Veolia's internal training and recertification process.	11
3	Bombardier should include an inspection or preventative maintenance check of the horns to ensure that the audible level remains at or above 85 dB as required by General Order 143-B, Section 3.04.	12
4	Veolia should ensure that train operators record their ID numbers when filling out the Employee Defect Repair Forms as required by Veolia's Standard Operating Procedures.	12
5	Bombardier should ensure that the mileage and engine hours on calendar day inspections are filled consistently for tracking purposes in generating work order tasks through the Maximo database program as required by contractual requirements.	12
6	NCTD should finalize and implement the Emergency Response Plan (ERP) as part of the emergency response process specified in NCTD SSPP Section 14.2.	14
7	NCTD should expand System Safety Review Committee scope to include safety data & unusual occurrences such as Train Operator Emergency Brake Application Reports and Dispatcher Logs collected by Veolia Transportation for analysis and mitigation of unsafe trends as required by NCTD SSPP Section 7, 15.4.1, and 16 (same recommendation as Checklist #31).	16
8	NCTD should develop a written procedure to track corrective actions identified by Transit America's Unusual Occurrence Report per NCTD	19

	SSPP Section 16.3.	
9	NCTD should require Veolia to develop a written procurement procedure for NCTD approval based on NCTD SSPP Section 23.2 requirements	23
10	Bombardier should affix labels to new equipment identifying calibration status as required by Bombardier Standard Operating Procedure Document 000001.	25
11	NCTD should require Veolia/Bombardier to develop a formal process for hours of service logs to record every employee's hours of service eliminating blank entries on timesheets based on GO 143-B, Section 12.04 Hours of Service – Safety Sensitive Employee, Section 14.03 Operator Records, and Sprinter Code of Rules – Rule 1.17 Hours of Service.	28
12	NCTD should revise the SSPP to include SB 1703 specifications and identify SANDAG's role for safety certification of all future Sprinter projects and revise SSPP Section 15.5 eliminating the safety certification project history.	29
13	NCTD should expand System Safety Review Committee scope to include safety data & unusual occurrences such as Train Operator Emergency Brake Application Reports and Dispatcher Logs collected by Veolia Transportation for analysis and mitigation of unsafe trends as required by NCTD SSPP Section 7, 15.4.1, and 16 (Recommendation identical to Checklist No. 16).	30

APPENDIX D

2009 NCTD SAFETY REVIEW CHECKLISTS

2009 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**1**	**Light Rail Vehicle Inspection – CPUC Inspector**	
Date of Audit	**April 28-30, 2009**	Department	**Vehicle Maintenance**
Auditors / Inspectors	**Carlos Tapia** **Mike Borer** **Vincent Kwong**	Persons Contacted	**Tom Pate – Bombardier Site General Manager** **Richard Berk – NCTD Rail Mechanical Maintenance Officer**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 11.3
2. CPUC General Order 143-B, Section 14.04
3. Bombardier Job List

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

LIGHT RAIL VEHICLE INSPECTION – CPUC INSPECTOR

Utilizing the services of CPUC/FRA qualified inspectors from the Commission's Railroad Operations Safety Branch and the Rail Engineering and Crossings Branch:

1. Review and evaluate the adequacy of Bombardier's Vehicle Inspection and Maintenance programs.
2. Randomly select at least four Siemens Diesel Multiple Unit (DMU) cars and perform detailed inspections to determine if Bombardier is properly and adequately maintaining:

    a. Axle Mounted Gearbox
    b. Truck/wheel components
    c. Brake systems
    d. Doors assemblies
    e. Coupling mechanism
    f. Passenger component/safety appliances
    g. Operator cab/appurtenance

Based on the review and the inspections, determine whether or not the selected DMU's are in compliance with the applicable reference criteria

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Daily Inspections

Staff observed Bombardier's Qualified Maintenance Persons (QMP) perform Daily Inspections of the four Sprinter Trains: Car Nos. 4003-A, 4003-B, 4007-B, and 4008-A.

Inspections were performed by Bombardier QMP's with the following results:

Visual checks of Axle Mounted Gearboxes - No Exceptions
Visual checks of Truck/Wheel components - No Exceptions
Brake System – Staff observed a Class 1 Brake Test performed on train consisting of cars 4008-A and 4007-B. The equipment passed with No Exceptions.
Demonstration of Door operation - No Exceptions
Visual check of Coupler - No Exceptions
Visual check of safety appliances - No Exceptions
Visual check of Blue Flag protection for railroad worker - No Exceptions

Comments

1. The Class 1 Brake Test involves two QMP's communicating via radio (one on the ground observing brake shoe application and release with second man inside vehicle at controls applying and releasing brake shoes). Staff witnessed the QMP at the controls warned partner on ground via the radio that brakes were going to be applied and proceeded to do so without waiting for a response from ground man being in the clear. Staff mentioned this observation to Site General Manager who agreed to look into the safety issue.
2. Staff had a general inquiry to Bombardier QMP's regarding process for brake pressure calibration. Bombardier agreed to obtain a response and provide details at a later date from equipment manufacturer Mercedes-Benz.

Recommendation:

None.

2009 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**2**	**Track and Switch Inspection – CPUC Inspector**	
Date of Audit	**April 28-29, 2009**	Department	**Wayside**
Auditors / Inspectors	**Dale Clugston** **Heidi Estrada** **John Madriaga** **Mike Stewart** **Hector Valdapena**	Persons Contacted	**Keith Kranda – Manager of Wayside** **Caleb Porter – TASI, Track Inspector**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP) dated 8-15-07, Revision 5, Section 11.3
2. CPUC General Order 143-B, Section 14.05
3. Transit America Services, Inc., Contract 05023, Subsection 08.05.2, San Diego Subdivision Mainline Track Maintenance dated 10-19-05.

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

TRACK AND SWITCH INSPECTIONS – CPUC INSPECTOR

Utilizing the services of CPUC/FRA qualified inspectors from the Commission's Railroad Operations Safety Branch and the Rail Engineering and Crossings Branch:

1. Review and evaluate the adequacy of Transit America Services, Inc.'s track inspection and signal inspection maintenance programs and standards.
2. Randomly select at least two sections of the mainline track and two turnouts on the mainline and perform visual & dimensional inspection/measurements to determine whether or not all track components are in compliance with the applicable reference criteria.
3. Randomly select four switches and perform an adjustment and functional check of selected switch machines components to determine whether or not all selected components are in compliance with the applicable reference criteria.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff reviewed Transit America Services, Inc. (TASI's) Track Standards Program and then performed track and switch inspections in accordance with 49 CFR Part 213 - interlocking/switch, 49 CFR Part 234 - signals inspections, and walkway inspections in accordance with General Order (GO) 118 - walkway inspections, and GO 26-D - side-clearance inspections at the following locations:

1. Control Point - Ocean and right-of-way
2. Control Point - True and right-of-way
3. Control Point – Wye and right-of-way
4. Coast Highway Station and right-of-way
5. Nordahl Station and mainline right-of-way
6. Escondido Avenue Station and right-of-way

Staff found GO 118 reasonable walkway infraction for one junction box cover at Control Point - True and one junction box cover at Control Point - Wye. A GO 118 reasonable walkway infraction was found by Staff at Coast Highway grade crossing / right-of-way (MP 100.3). The walkway infractions require extra ballast to make a reasonable walkway at these locations. No other exceptions were noted by Staff.

Staff performed a 49 CFR Part 213 Track Inspection on-board Sprinter cab round trip inspection of the (Oceanside to Escondido). No exceptions were noted by Staff during the Sprinter cab track inspection.

Recommendation:

NCTD should survey the mainline right of way to verify GO 118 reasonable walkway compliance.

2009 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	3	Grade Crossing Warning Devices – CPUC Inspector	
Date of Audit	**April 27, 2009**	Department	**Wayside**
Auditors / Inspectors	**Heidi Estrada**	Persons Contacted	**Chad Baker – Manager of Signals (TASI)**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 11.3
2. CPUC General Order 75-D, Equipment and Signage Requirements
3. CPUC General Order 143-B, Section 14.05
4. 49 CFR Part 234, Highway Rail Grade Crossing Inspections
5. Manual Uniform Traffic Control Devices (MUTCD), Signage Requirements

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

GATED GRADE CROSSINGS WARNING DEVICES – CPUC INSPECTOR

Utilizing the services of CPUC/FRA qualified inspectors from the Commission's Railroad Operations Safety Branch and the Rail Engineering and Crossings Branch:

Randomly select seven gated crossings and perform detailed inspections to ensure whether or not highway rail grade crossing warning devices are working as intended according to 49 CFR Part 234. The inspection includes a visual check of the alignment of warning lights, reflective striping on the gate arms, roadway warning signage & striping, and the voltage levels measurements of the warning lights both in normal mode (AC power) and in standby mode (DC battery power).

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff performed 49 CFR Part 234 detailed inspections of the following grade crossings:

1. Crouch Street, Oceanside, Milepost 101.60

2. El Camino Real, Oceanside, Milepost 102.9
3. Vista Village Drive, City of Vista, Milepost 109.2
4. South Santa Fe Avenue, City of Vista, Milepost 111.9
5. Buena Creek Road, City of Vista, Milepost 112.4
6. Barham Drive, Escondido, Milepost 119.1
7. Citricado Parkway (Auto Center Drive), Escondido, Milepost 119.3

Staff performed a visual check of the alignment of warning lights, reflective striping on the gate arms, roadway warning signage & striping, and the voltage levels measurements of the warning lights both in normal mode (AC power) and in standby mode (DC battery power). No exceptions were noted by Staff.

Recommendation:

None.

2009 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	4	**Sprinter Operations Facilities – CPUC Inspector**	
Date of Review	**April 28 &29, 2009**	Department	**Transportation**
Reviewers / Inspectors	**Don Filippi**	Persons Contacted	**Craig Bowerman – Veolia Transportation Manager**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 11.3, 12.0, and 13.0
2. Sprinter Code of Operating Rules (SCOR) – Sprinter Operations
3. General Code of Operating Rule (GCOR) – Freight Operations (temporal separation)

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

SPRINTER OPERATIONS FACILITIES – YARD AND MAINLINE OPERATIONS

Utilizing the services of CPUC/FRA qualified inspectors from the Commission's Railroad Operations Safety Branch and the Rail Engineering and Crossings Branch, the inspectors will perform the following:

Sprinter Operations Yard Operations:

1. Observe train operations in the Sprinter Operations Facilities Yard for at least two hours to determine if:
   a) Trains are being operated in compliance with applicable Veolia Transportation operating rules and procedures:
   b) The Veolia Transportation train operators prior to departing the yards to enter revenue service, correctly perform pre-trip inspections;
   c) Coupling and uncoupling actions are performed safely and according to rules and procedures;
2. Perform a random inspection of at least two departing Veolia Transportation train operators to determine if they have all of the required safety items including flashlights, SCOR Rules

Books, current Track and Warrant Listing Bulletins, Timetable / Special Instructions, General Orders in-effect and radio(s) programmed to proper channel.

3. Interview at least four Veolia Transportation train operators to evaluate their knowledge and understanding of Veolia Transportation's SCOR operating rules and procedures for yard operations.

Mainline Operations:

1. Inspector to perform a "check ride" and observe, the operations of at least three Sprinter trains in revenue service on the mainline to determine if:

   a) Each Veolia Transportation train operator performs in compliance with the governing orders, rules and procedures, etc. and;

   b) Each Veolia Transportation train operator possesses the required on-board safety equipment.

2. Interview at least four Veolia Transportation train operators to evaluate their knowledge and understanding of Veolia Transportation's rules and procedures related to LRV mainline operations.

Dispatcher Operations:

1. Inspector through a combination of direct observations, document reviews, and interviews with Veolia Transportation Dispatcher to determine if:

   a) Applicable reports, logs or records are properly prepared, maintained, and available upon request for review

   b) Duties are performed in accordance with Veolia Transportation's SCOR/GCOR, Escondido Subdivision Trains Dispatcher's Manual including all Bulletins, General Notices and Special Instructions.

   c) Veolia Transportation Dispatchers are knowledgeable in dealing with incidents, accidents, and emergency response situations

   d) Veolia Transportation Dispatchers perform the "temporal separation" duties for freight train service in accordance with GCOR.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Yard Operations

Staff observed Sprinter trains arriving and departing the Veolia facility and train operators were performing their duties according to Veolia operating procedures. Train Operators performed their pre-trip inspections and had all their required documents prior to boarding the train.

Staff did not observe yard train coupling and uncoupling due to the fact that Veolia is running single car trains. However the operators understood the procedure for coupling and uncoupling trains.

Mainline Operations

Staff interviewed six Veolia train operators regarding mainline operating procedures. Staff found the six train operators very well informed on procedures and applicable rules, and they answered numerous questions about yard and main line movement. Staff observed all six train operators carried the required rule books, timetables, general orders and special instructions. Staff rode with four train operators as follows: Train # 4011 west, Train # 4012 east, Train # 4008 east and Train # 4006 west. Staff observed all four operated according to policy and regulations and found them to be very professional and aware of their surroundings.

Dispatcher Operations

Staff observed the Sprinter Operation Facilities dispatchers performing their duties and interviewed them on operational questions. Staff found all log books and records in order and dispatchers answered operating rules questions and were very familiar with main line procedures, including knowledge of both light rail transit and freight train operations. Staff was satisfied with Veolia's emergency response procedure and found measures in place for unusual situations on the main line. The operations dispatchers randomly place trains on diverging routes to keep the dispatchers and train operators focused on unusual operations. This practice allows Sprinter patron's familiarity with boarding trains on opposite platforms due to unforeseen circumstances on the main line.

Staff found the Veolia managers were helpful and professional as a direct reflection of their General Manager commitment to a safe and efficient operation at Sprinter.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**5**	**Track, Signals, and Vital Relay Maintenance**	
Date of Audit	**April 29, 2009**	Department	**Wayside**
Auditors / Inspectors	**Jimmy Xia** **Colleen Sullivan**	Persons Contacted	**Mike Chavez – Manager of Maintenance of Way (TASI)** **Chad Baker – Manager of Signals (TASI)**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 11.3
2. CPUC General Order 143-B, Section 14.05
3. 49 CFR Part 213, Track Inspections
4. 49 CFR Part 234, Signal Inspections
5. Transit America Services, Inc. Contract 05023, Subsection 08.05.2 San Diego Subdivision Mainline Track Maintenance, dated 10-19-05.

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

TRACK, SIGNALS AND VITAL RELAY MAINTENANCE

1. Review Transit America Services, Inc.'s records of preventive maintenance, scheduled and unscheduled maintenance activities for track, signals and vital relays to determine if inspections were performed at the required frequencies as specified in the reference criteria.
2. Determine if inspections were properly documented and corrected in a timely manner.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed Transit America Services, Inc.'s (TASI) representatives in charge of track, signals, and vital relay maintenance. Staff reviewed the preventive maintenance records and found the following:

1. Mainline Track Inspections and Maintenance
   a. Semiweekly Track Inspections
      1. Staff reviewed the Sprinter Line track inspection and repair records dated March 2008 – April 2009. All track inspections were performed by TASI at the required frequency at least twice per week and properly documented on the NCTD's Track Inspection Reports. All noted defects were corrected by TASI in a timely manner.

   b. Track Geometry Inspections
      1. The track maintenance contractor performs Geometry Inspections annually as required by TASI's Contract 05023, Subsection 08.05.2 - San Diego Subdivision Main Line Track Maintenance, dated 10-19-05.
      2. TASI's Manager of Maintenance of Way stated the first track geometry inspection was performed on January 7-8, 2009. Revenue service began on March 2008 and the track maintenance contractor requested TASI to wait until January 2009 to perform the track geometry inspection while they performed detailed tests throughout 2008. The next track geometry inspection is scheduled for late Fall 2009.
      3. Staff reviewed Track Geometry Inspection Reports dated January 7-8, 2009. The contractor's reports did not identify any major exceptions.

   c. Ultrasonic Rail Testing
      1. The track maintenance contractor performs Ultrasonic Tests twice per year as required by TASI's Contract 05023, Subsection 08.05.2 - San Diego Subdivision Main Line Track Maintenance, dated 10-19-05.
      2. The first Ultrasonic Tests were performed by TASI track maintenance contractor on March 12-14, 2008. All noted defects were corrected by TASI in a timely manner. No exceptions were noted by Staff.
      3. The second Ultrasonic Tests were performed by TASI track maintenance contractor on November 14, 2008. The inspection report indicates no defects were found by TASI track maintenance contractor from this test.
      4. The 2009 Ultrasonic Tests are scheduled May 2009 and November 2009.

2. Signal Inspection Records

   Staff reviewed the Signal Inspection Records dated March 2008 – March 2009 at the following signal locations:

   a. Control Point (CP) Ocean

b. Signal 1021
c. Melrose Nearside
d. Signals 1101/1106 & 1103/1108
e. San Marcos Nearside
f. CP Shelly
g. CP Holdout

All signals were inspected by TASI at the required frequencies, properly documented by TASI on Form SDNR 236, and all noted defects were corrected by TASI in a timely manner. No exceptions were noted by Staff.

3. Vital Relay Inspection Records
    1. According to the San Diego Northern Railway Signal Maintenance, Inspection, and Testing Manual dated August 1993, TASI inspects the vital relays on the Sprinter line once every four years as per FRA Rule # 236.106 and documents the inspections on Form SDNR 234.263/236.102/106. Also, TASI conducts visual inspections of vital relays every six months and the inspection forms for these inspections are kept by TASI at the signal houses.
    2. All Sprinter Line vital relays on the entire Sprinter line were initially inspected by TASI on May 2006 to April 2008 for the Sprinter Safety Certification Process.
    3. Staff's findings from the seven vital relay inspection and test records for the signal cases findings are identified as follows:

Location of Signal Case & Relay Names	Date(s) Previously Tested	Results of Test	Next Due Date for Test
Intermediate: VRDR, VR0PR, VR0P2R, 2WTR, 1WTR	5/8/2007	Pass	5/7/2011
Guajome St: XR, 1MDR, ER, AWDR, GEPPR, 1GWPPR, 2GWPPR, 1GWXR, 2GWXR, 1AX1R	2/8/2007 & 4/10/2007	Pass	2/7/2011
Intermediate 1052/1054: VRDPR, VRD	10/18/2007	Pass	10/17/2011

Signals 1031/1033: VRDPR, VRDR	10/12/2007	Pass	10/11/2011
West LA Drive: TR, XTR, 1ETR, 2ETR, AWDR, XR, 1AXIR, WMDR, 1AX2R, EMDR, 2AX1R, ER, NWPR, RWPR, VRDR, VRDPR	5/18/2007	Pass	5/17/2011
CP (Control Point) Ocean: VRDP2R, VR0PR, VRDR, 1RWP, 1NWP, 3EATR, 1EATR, XTR, TR	7/11/2007	Pass	7/10/2011
CP Loop East: VRDR, VRDPR, VRDPPR, WTR, ETR, TR, XTR, 3WTR, 3AX1R, 3AX2R, 1NWR, 1RWR, 1NWPR, 1NWPPR, 1RWPR, 1RWPPR	8/10/2006	Pass	8/9/2010

4. All vital relay inspections were properly documented by TASI on Form SDNR 234.263/236.102/106. All vital relays passed the required tests, inspection forms were completed by TASI, signed by the responsible TASI personnel , and no defects were found by TASI from the tests. No exceptions were noted by Staff.

5. All vital relays in the table above were initially inspected by TASI and scheduled for the 4-year inspections. No exceptions were noted by Staff.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	6	Track and Signal Maintainer Training Program	
Date of Audit	**April 28, 2009**	Department	**Wayside**
Auditors / Inspectors	**Jimmy Xia** **Colleen Sullivan**	Persons Contacted	**Chad Baker – Transit America Services, Inc. (TASI) Manager of Signals** **Robert Schrecengost –TASI Safety and Compliance** **Kevin Merlo – TASI Manager of Compliance and Safety** **Mike Chavez – TASI Manager of Maintenance of Way**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 13.3.5
2. CPUC General Order 143-B, Section 14.03
3. 49 CFR Part 234, Signal Inspections
4. 49 CFR Part 213, Track Inspections
5. Transit America Services, Inc. Training Program Matrix – FRA Part 213 Training; Continuous Welded Rail (CWR).

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

TRACK AND SIGNAL MAINTAINER TRAINING PROGRAM

Randomly select the names of at least three persons in the classification of (1) Track Maintainer and (2) Signal Maintainer and review Transit America Services, Inc.'s training and certification records for a minimum of the past 2-years and to determine whether or not:

1. The maintainer has received the required training to perform inspections.
2. Documents are on-file to show that the maintainer is qualified to perform the inspections.
3. The maintainer has been re-certified at the required frequency.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed Transit America Services, Inc. (TASI) track and signal maintenance training representatives and reviewed the training and certification records for three randomly selected employees from both the Track Maintainer and Signal Maintainer classifications. Staff found the following:

1. TASI provides all new Track Maintainers and Signal Maintainers the one-time territory qualification training for the Sprinter line which does not require a re-certification. Training consists of taking several trips in a hi-rail vehicle on the mainline and taking one written test at the end of training for certification. The territory qualification familiarizes the trainees with the Sprinter rail system and teaches them skills such as identifying the control points in the same system.

2. TASI provides all Maintenance of Way (MOW) or Maintenance of Signals (MOS) employees training classes identified on TASI's Training Program Matrix once every year. TASI's track and signal maintenance Manager maintains the matrix which identifies training status of employees; it is updated when the MOW/MOS employees receive any re-training.
    1. General Code of Operating Rules (GCOR) training
        A. The GCOR governs the operations of the Sprinter rail system and provides the standards for the safety of employees and the public and for efficiency of operation of the Sprinter system including the tracks, on track equipment, switches, and signals, etc.
        B. The GCOR class has one exam with 60 multiple-choice questions and 1 short answer question.
    2. Roadway Worker Protection (RWP)/On-Track Safety (OTS) training and Lone Worker training
        A. The Lone Worker training is part of the RWP/OTS training class and both training classes are combined with one exam with 25 multiple-choice questions.

3. The GCOR, RWP/OTS, and Lone Worker refresher training classes starts at the beginning of every year and scheduled completion occurs by June.

4. Track Maintainers and Signal Maintainers need to score at least 80% on the exam for each of the required training classes to pass each of these classes.

5. Track Maintainer Training Program

1. All new track maintenance employees need to complete all classes identified in TASI's Training Program Matrix to become certified as Track Maintainers:
   A. FRA 49 CFR Part 213 training class
      a. FRA 49 CFR Part 213 class and Continuous Welded Rail (CWR) class are two-day classes consisting of one day of field training and one day of classroom training. A final exam minimum score of 80% is required to pass.
      b. FRA 49 CFR Part 213 requires railroad agencies to provide both the FRA Part 213 and CWR training classes to their Track Maintainers once every two years. TASI's new consultant will provide the FRA Part 213 and CWR training courses to the TASI's Track Maintainers on a yearly basis.
   B. FRA Part 213.7 A and FRA Part 213.7 B trainings
      a. Students become qualified in FRA Parts 213.7 A and 213.7 B after successful completion of FRA Part 213 class.
   C. Continuous Welded Rail (CWR) training class
      a. The CWR training class has three written tests for certification. A minimum total score of 80% on these tests for this class is required for passing.

2. Staff reviewed three Track Maintainers listed on TASI's Training Program Matrix for the training sign-in sheets, and test records and found the following.
   A. Two track maintainers completed their original FRA Part 213 training class and became qualified in FRA Parts 213.7 A and 213.7 B on June 17, 2008 with a 100% score; completed their original CWR training on June 17, 2008 and scored 100% and 90%, respectively. TASI's new training consultant will provide the next FRA Part 213 re-certification training class to the TASI's Track Maintainers in May 2009. On May 8, 2009, subsequent to this audit, the TASI representatives emailed Staff the FRA Part 213 training class sign-in sheet dated May 7, 2009 that shows the two maintainers were recertified and on May 13, 2009, Staff received the answer sheets with passing scores of 92% and 91% respectively. CWR re-certification training is due May 2009, and their next FRA Part 213 and CWR recertification due spring 2010.
   B. Three maintainers completed territorial qualification training on May 8, 2008 and received a score of 100% on the 2008 Sprinter Territory Qualification Test. All of them successfully passed the GCOR training class on April 23, 2009; completed the RWP/OTS and Lone Worker classes on February 5, 2009 and scored 100% on the 2009 On-Track Safety Test. GCOR and RWP/OTS and Lone Worker refresher training classes are scheduled June 2010.
   C. One track maintainer qualified in FRA Parts 213.7 A and 213.7 B as shown in the TASI's Training Program Matrix, but was not available to take the initial FRA Part 213 and

CWR training classes that provided by Herzog Companies Inc., TASI's parent company, in June 2008. TASI representatives stated they will schedule him for the May 2009 FRA Part 213 and CWR training classes. On May 8, 2009, subsequent to this audit, TASI representatives emailed Staff the FRA Part 213 training class sign-in sheet dated May 7, 2009, that shows the track maintainer was certified with a passing score of 87%. The track maintainer is scheduled for his first CWR training class in May 2009; FRA Part 213 and CWR recertification due Spring 2010.

3. All Track Maintainers receive on-the-job training for on-track machines such as tampers and ballast regulators and how to operate them. The trainer performs field/visual evaluation of the trainees to assess their proficiency for on-track machine operations. If the trainees fail the field evaluation, they have the opportunity for retraining to pass the field evaluation.

6. Signal Maintainer Training Program
   1. All new Signal Maintenance employees are required to complete the six-week Signal Apprentice Training Program for signal maintainer certification. The program is delivered in three, two-week sessions and includes one 100 question multiple-choice examination at the end of each of the three training sessions. A combined score of 70% from all three training sessions is considered a passing grade. The new Signal Maintainers are required to complete this program once and no future re-certifications are required.
   2. All new Signal Inspectors also need to complete the one-week FRA Inspections and Tests Course, which the employees who are just Signal Maintainers don't need to take, in addition to completing the six-week Signal Apprentice Training Program. More details about this course are included in the syllabus for this course. All new Signal Inspectors only need to complete this program once and no re-certification of this program is required.
   3. Staff reviewed TASI's Training Program Matrix training records, training sign-in sheets, training certificates, training scores, and test records of two Signal Maintainers and one Signal Inspector and found the following.
      A. One signal maintainer attended the Six-week Signal Apprentice Training Program Session 1 on January 8-19, 2007, Session 2 on May 14-25, 2007, and Session 3 on September 17-28, 2007. He received a cumulative test score of 89% and received the Six-Week Signal Apprentice Training Program certificate.
      B. One signal maintainer and one signal inspector attended the Six-week Signal Apprentice Training Program Session 1 on August 20-31, 2007, Session 2 on October 1-12, 2007, and Session 3 on November 5-16, 2007. They both received a cumulative test score of 96% received the Six-Week Signal Apprentice Training Program certificate.
      C. One signal inspector attended the One-week FRA Inspections and Tests Course on

November 17-21, 2008, scored 94% on the exam, and received the FRA Inspection and Test Course certificate.

D. Two signal maintainers and one signal inspector successfully completed the Territorial Qualification Training on May 8, 2008. One signal maintainer and one signal inspector passed GCOR training class on March 25, 2009 and the RWP/OTS and Lone Worker training class on February 11, 2009. One signal maintainer passed GCOR training class on April 23, 2009 and RWP/OTS and Lone Worker training class on February 11, 2009. All three passed the 2009 On-Track Safety Test with a 100% exam score. The next GCOR and RWP/OTS and Lone Worker refresher training classes are scheduled June 2010.

7. All Track Maintainers and Signal Maintainers will receive a certification card in both the GCOR and RWP/OTS classes in 2009. The GCOR and RWP/OTS classes are scheduled for completion in late-May 2009.

8. The three randomly selected Track Maintainers have received the required training as listed on the TASI's Training Program Matrix to perform inspections of the tracks and signals.

9. The Certificates of Completion of the three Signal Maintainers selected and the test records and passing scores for the required training classes for all six selected employees show all are qualified to perform inspections.

10. TASI is re-certifying all of the six randomly selected MOW/MOS employees at the required frequencies. No exceptions were noted by Staff.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**7**	**Grade Crossing Equipment Maintenance**	
Date of Audit	**April 28, 2009**	Department	**Wayside – Transit America Services, Inc.**
Auditors / Inspectors	**Jimmy Xia** **Colleen Sullivan**	Persons Contacted	**Chad Baker – Manager of Signals (TASI)**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 11.3
2. 49 CFR Part 234, Signal Inspections
3. Transit America Services, Inc. MOS Maintenance, Inspections and Tests, dated 4-2009

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

GRADE CROSSINGS EQUIPMENT MAINTENANCE

Randomly select at least seven gated grade crossings and review Transit America Services, Inc.'s inspection & maintenance records during year 2008 to determine whether or not:

1. The gates were inspected and maintained regularly
2. Inspections were properly documented
3. Noted defects were corrected in a timely manner

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed the Transit America Services, Inc.'s (TASI) representative in charge of grade crossing equipment maintenance and reviewed the gated crossing maintenance inspection records for the following:

1. Crouch Street
    a. All monthly inspection reports from March 2008 - March 2009 were performed by TASI. . No exceptions were noted by Staff.
    b. All quarterly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.
    c. All annual inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.
    d. All inspections were performed by TASI at the required frequencies and properly documented by TASI on Form SDNR 234, and all noted defects were corrected by TASI in a timely manner. No exceptions were noted by Staff.

2. El Camino Real
    a. All monthly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.
    b. All quarterly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.
    c. All annual inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.
    d. All inspections were performed by TASI at the required frequencies and properly documented by TASI on Form SDNR 234, and all noted defects were corrected by TASI in a timely manner. No exceptions were noted by Staff.

3. Vista Village Drive
    a. All monthly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.
    b. All quarterly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.
    c. All annual inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.
    d. All inspections were performed by TASI at the required frequencies and properly documented by TASI on Form SDNR 234, and all noted defects were corrected by TASI in a timely manner. No exceptions were noted by Staff.

4. South Santa Fe Road
    a. All monthly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.

b. All quarterly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.

c. All annual inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.

d. All inspections were performed by TASI at the required frequencies and properly documented by TASI on Form SDNR 234, and all noted defects were corrected by TASI in a timely manner. No exceptions were noted by Staff.

5. Buena Creek Road

a. All monthly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.

b. All quarterly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.

c. All annual inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.

d. All inspections were performed by TASI at the required frequencies and properly documented on Form SDNR 234, and all noted defects were corrected in a timely manner. No exceptions were noted by Staff.

6. Barham Drive

a. All monthly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.

b. All quarterly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.

c. The annual grade crossing inspection was performed by TASI on September 25, 2008 and the next scheduled annual inspection is in September 2009. No exceptions were noted by Staff.

d. All inspections were performed at the required frequencies and properly documented on Form SDNR 234, and all noted defects were corrected in a timely manner by TASI. No exceptions were noted by Staff.

7. Citracado Parkway

a. All monthly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.

b. All quarterly inspection reports from March 2008 - March 2009 were performed by TASI. No exceptions were noted by Staff.

c. The annual grade crossing inspection was performed by TASI on September 25, 2008 and the next scheduled annual inspection is in September 2009. No exceptions were noted by Staff.

d. All inspections were performed at the required frequencies and properly documented on Form SDNR 234, and all noted defects were corrected in a timely manner by TASI. No exceptions were noted by Staff.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	8	**Accident / Incident Reporting & Investigation**	
Date of Audit	**April 30, 2009**	Department	**Safety**
Auditors / Inspectors	**Claudia Lam** **Howard Huie**	Persons Contacted	**Eric Contreras – Rail Safety Inspector / Auditor**

REFERENCE CRITERIA

3. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 8.0
4. NCTD Accident Investigation Procedures, dated October 2007
5. Veolia Transportation Incident Packet
6. CPUC General Order 164-D, Section Nos. 7, 8 and 9.

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

ACCIDENT / INCIDENT REPORTING & INVESTIGATION

Interview NCTD representatives directly involved in accident reporting and review at least two reportable accident reports submitted to the CPUC since Sprinter revenue service on March 9, 2008 to determine whether or not:

a. The accidents were reported to the CPUC within 2-hours as required by GO 164-D, section 7
b. The accident investigation activities and reports were in accordance with the reference criteria and GO 164-D, Section Nos. 8 and 9.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

1. NCTD had two immediately reportable incidents for Year 2008 which are:

   a. Trespasser at Milepost 118.9 Rancheros Drive - 03/11/08.
   b. Fatality at Milepost 226.80 near Wisconsin Avenue Grade Crossing - 12/23/08.

2. The two accidents were reported by NCTD to the CPUC designated representative within 2 hours as required by G.O. 164-D, Section 7. Staff's review of the March 11, 2008 Final Report revealed page 2 was missing however, a complete Final Report was later found.

3. Form T's & V's were submitted by NCTD to CPUC designated representative at the end of the month as required by G.O. 164-D.

4. The accident investigation activities and reports were in accordance with the reference criteria and G.O. 164-D, Section 8 and 9; and the final reports were submitted by NCTD to the PUC within 60 days as required by G.O. 164-D.

Note: When a reportable incident occurs, Veolia which is contracted for Operations by NCTD, notifies the CPUC designated representative, performs the initial accident investigation and prepares the draft accident investigation report. NCTD staff and Veolia jointly meet at the accident scene to take pictures and perform an independent investigation. Veolia submits a preliminary accident report to NCTD for review and approval. If there are disagreements between the two agencies, NCTD creates a report in conjunction with Veolia and NCTD's accident review committee review both accident reports. The NCTD accident review committee sends a revised accident report which incorporates both agencies investigation to NCTD's Director of Rail Services to decide which final accident report is sent to the CPUC designated representative.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**9**	**Internal Safety Audit Program**	
Date of Audit	**April 30, 2009**	Department	**Safety**
Auditors / Inspectors	**Claudia Lam** **Howard Huie**	Persons Contacted	**Eric Contreras – Rail Safety Inspector / Auditor**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 9.0
2. CPUC General Order 164-D, Section 5.0

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

INTERNAL SAFETY AUDIT PROGRAM

Interview the NCTD representative in charge of the Internal Safety Audit Program and review the audit reports for year 2008 and determine whether or not:

1. Annual internal safety audits (ISA)were performed in accordance with the applicable reference Criteria.
2. All of the required safety program elements were covered within a three year audit cycle and compliance with the SSPP was evaluated by auditors who are independent from the first line of supervision responsible for performance of the activity being audited.
3. The annual ISA reports were prepared and submitted to the CPUC by February 15th of each year and corrective action plan recommendations were prepared, tracked and implemented in a timely manner.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed NCTD's Rail Inspector / Auditor in charge of the Internal Safety Audit Program and determined the following:

1. The 2008 Annual Internal Safety Audit (ISA) was performed by NCTD in accordance with the applicable reference criteria.
   a. NCTD ISA reviewed all 21-elements. The Rail Inspector / Auditor from NCTD Safety, oversees most of elements except checklist of safety department. NCTD Director of Rail Services oversees the Safety Department ISA to ensure ISA is a non-bias review.
   b. NCTD performs Quarterly ISAs to create the annual ISA 21-element report. Elements not closed in the same quarter report will have a follow up status in the next quarterly report and it may continue in the annual ISA report.

2. All of the required safety program elements were covered by NCTD within a three year audit cycle and compliance with the SSPP was elevated by auditors who are independent from the first line of supervision responsible for performance of the activity being audited.

3. The annual ISA report was prepared by NCTD and submitted by NCTD to the CPUC designated representative on February 13, 2009.
   a. NCTD's transmittal report to CPUC identified 16 elements reviewed. Five elements checked GO143-B compliance, three elements checked GO 164-D compliance, and the remaining eight elements checked NCTD's System Safety Program Plan compliance. The remaining five elements not review in 2008 ISA will be completed in 2009. NCTD anticipates ISA 2009 completion of all 21-elements.
   b. Corrective Action Plans are tracked by NCTD through Transit Safe database until implementation and closure of infraction.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	10	Facilities Inspections	
Date of Audit	**April 29, 2009**	Department	**Wayside**
Auditors / Inspectors	**Noel Takahara**	Persons Contacted	**Tom Gallagher – Manager of Facilities Maintenance** **Chad Baker – Manager of Signals (TASI)**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 10.0
2. Transit America Services, Inc. – Escondido Avenue South Platform Gap Filler Maintenance
3. Veolia Transportation Sprinter Operations Facilities Inspection

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

FACILITIES INSPECTIONS

Randomly select at least five light rail stations on the Sprinter Line and review Transit America Services, Inc.'s maintenance records to determine whether or not:

1. Inspections were performed at the required frequency interval and documented as required.
2. Noted defects were corrected and documented in a timely manner.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed NCTD's Manager of Facilities Inspection and TASI's Manager of Signal Inspections and determined NCTD's Facilities Inspections include periodic preventative maintenance and monthly safety inspections of all Sprinter facilities including stations and the Sprinter Operations Facility. TASI performs the monthly maintenance inspections of the gangways and Escondido Avenue platform gap fillers, which is associated with the signal systems.

The NCTD Facility Maintenance Department staff of 40, conducts periodic preventative maintenance of Breeze, Coaster, and Sprinter operations. The work is assigned via industry specific

software utilizing an auto-prioritization system. Work priority is based on the type, age of the work, as well as the hazard that may be associated by untimely service and completion. Daily printouts are made detailing work order priority and pending work orders.

Staff found all monthly facilities inspections are being performed by NCTD and documented at the required intervals. No exceptions were noted by Staff.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**11**	**Train Operator and Dispatcher Training & Recertification**	
Date of Audit	**April 29, 2009**	Department	**Transportation**
Auditors / Inspectors	**Don Filippi**	Persons Contacted	**Jeff Conley – Safety Manager** **Craig Bowerman – Transportation Manager**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 13.3.3, 13.3.3, 13.3.4
2. CPUC General Order 143-B, Section 13.03, 13.04
3. Veolia Transportation- Record of Training Modules / Recertification

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

TRAIN OPERATOR AND DISPATCHER TRAINING PROGRAM

Interview the Veolia Transportation representative in charge of the Train Operator and Dispatcher Certification Program and review relevant available documentation prepared during the last three years to determine whether or not Veolia Transportation complied with the requirements of the certification program for all train operators and dispatchers

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed the Veolia manager responsible for train operators and dispatchers training. The training program appeared very effective and their record keeping was in order. Veoila's current re-certification program exceeds the minimum regulatory standard requirements.

Veolia's trainer's recertification program was not implemented. Staff could not find documentation to show Veolia managers were administered an annual rules exam. Managers involved with training, rules compliance, yard movement, main line movement and over-all operations at Veolia, did not have the mandatory annual rules exam in accordance with Sprinter Code Operating Rule 1.3.1, Rules, Regulations and Instructions, 49 Code of Federal Regulations

Part 240 Operations Testing Reference Guide for Train Operators, Testing Authorization pg.3, Sprinter Light Rail Transit System, System Safety Program Plan, Section 13 Training and Certification Review, pg.37 and Veolia's internal training and recertification process. Veolia's trainer program did not have the formal class to review new rules, procedures, regulations and operating practices and formal documentation stored in manager's files in accordance with 49 Code of Federal Regulations Part 240 Operations Testing Reference Guide for Train Operators, Testing Authorization pg.3,, Sprinter Light Rail Transit System, System Safety Program Plan, Section 13 Training and Certification Review, pg.37 and Veolia's internal training and recertification process **.** The recertification requirements apply to all Veolia Managers who are qualified operators and dispatchers.

Recommendation:

NCTD should verify Veolia develops and implements a re-certification program for Veolia Manager's responsible for training, rules compliance, yard movement, mainline operations, and overall Veolia operations as required by Sprinter Code Operating Rule 1.3.1, Rules, Regulations and Instructions, 49 Code of Federal Regulations (CFR) Part 240 Operations Testing Reference Guide for Train Operators, Testing Authorization pg.3, Sprinter Light Rail Transit System, System Safety Program Plan, Section 13 Training and Certification Review, pg.37 and Veolia's internal training and recertification process.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	12	Light Rail Vehicle Maintenance	
Date of Audit	**April 29, 2009**	Department	**Vehicle Maintenance**
Auditors / Inspectors	**Vince Kwong** **Mike Borer**	Persons Contacted	**Tom Pate – Site General Manager** **Casey Klein – Quality Assurance Technician**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 11.3, 11.3.b
2. CPUC General Order 143-B, Section 14.04
3. Bombardier Job Plan: Calendar Day – Daily, F1 6-week inspection , F2 3-month inspection, F3 6-month inspection, F4 1-year inspection, F5 2-year inspection, Wheel set Measurement – every 3-months, Class 1 Brake Test, Power Pack Inspections (1K, 2K, 4K, 8K, 16K).

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

LIGHT RAIL VEHICLE MAINTENANCE

Randomly select a minimum of four Sprinter vehicles from the vehicle fleet and review Bombardier's maintenance records to determine whether or not:

1. Vehicles were inspected at the required frequencies as specified in the reference criteria.
2. Inspections were properly documented.
3. Noted defects were corrected in a timely manner.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed Bombardier personnel on the recordkeeping and vehicle maintenance program. All maintenance schedules and activities records are managed by a computer program called

Maximo. Work Orders and Employee Defect Repair Forms are entered, filed, and monitored Bombardier personnel in the computer system. Bombardier personnel can query a vehicles' history of reported defects found during an inspection.

Staff selected four Sprinter vehicles and reviewed each of the following records:

- Calendar Day Inspection
- Employee Defect Repair
- Preventative Maintenance for Power Packs
- Preventative Maintenance for Car Body

Staff found that reported issues were addressed and repaired Bombardier personnel within one day.

Preventative maintenance occurs on a time schedule, mileage, or engine hour frequency interval. The buffer inspection interval allowed Bombardier personnel is 100 engine hours or 10 days from the mileage count. Any vehicle exceeding the limits was not allowed Bombardier personnel in revenue service.

Vehicle 4002

Calendar Day Inspection

Calendar Day Work Order #120203 – 1/7/09 completed

Engine Hours: A-End 3172 Hrs / B-End 3166 Hrs

Mileage: 48067 Miles

No Major Problems were found by Bombardier personnel

Last Reported Issues – 103769 GSP Controller/microphones; 102693 announcements not able; 100771 burning oil smelled by EDR #8835 (reported 10/28/08 : 10/29/08 replaced belt tensioner and water pump belt); 99762 cab light went out; 90180 headlights are very dim

Power Pack Preventative Maintenance

Power Pack 4k Work Order #145028 A-End/#145046 B-End – 3/25/09 completed

Engine Hours: A-End 4086.3 Hrs / B-End 4080 Hrs

Mileage: 65731 Miles

No Major Problems were found.

Last Power Pack performed at 1k Work Order #102509 A-End/#102516 B-End – 12/17/09 completed

Engine Hours: A-End 3031 Hrs / B-End 3025 Hrs

Mileage: 452021 Miles

No Major Problems were found by Bombardier personnel

Car Body Preventative Maintenance

Car Body 6 Week Work Order #121615 – 2/14/09 completed

Engine Hours: A-End 3611 Hrs / B-End 3604 Hrs

Mileage: 56614 Miles

No Major Problems by Bombardier personnel

Car Body 3 Month Work Order #141909 – 4/4/09 completed

Engine Hours: A-End 4192 Hrs / B-End 4186 Hrs

Mileage: 67802 Miles

No Major Problems by Bombardier personnel

Vehicle 4003

Calendar Day Inspection

Calendar Day Work Order #149333 – 4/17/09 completed

Engine Hours: A-End 2891 Hrs / B-End 2993 Hrs

Mileage: 48959 Miles

No Major Problems by Bombardier personnel

Last Reported Issues – 145174 Oil leaking from around air compressor; 140879 Train Operating Display not responding to "Confirm Config" Command; 138856 Fire Detection Test Failed; 124388 Camera event trigger button not indicating event pressed; 123705 Download, save and file then erase logged memory

Power Pack Preventative Maintenance

Power Pack 2k Work Order #79731 A-End/#79742 B-End – 1/21/09 completed

Engine Hours: A-End 2078 Hrs / B-End 2184 Hrs

Mileage: 33298 Miles

No Major Problems by Bombardier personnel

Last Power Pack performed at 1k Work Order #42843 A-End/#42850 B-End – 4/11/09 completed

Engine Hours: A-End 1096 Hrs / B-End 1092 Hrs

Mileage: 11749 Miles

No Major Problems by Bombardier personnel

Car Body Preventative Maintenance

Car Body 6 Month Work Order #112700 – 1/7/09 completed
Engine Hours: A-End 1938 Hrs / B-End 2044 Hrs
Mileage: 30555 Miles
No Major Problems by Bombardier personnel

Car Body 6 Week Work Order #124130 – 2/18/09 completed
Engine Hours: A-End 3285 Hrs / B-End 2490 Hrs
Mileage: 39318 Miles
No Major Problems by Bombardier personnel

Car Body 3 Month Work Order #138752 – 3/29/09 completed
Engine Hours: A-End 2752 Hrs / B-End 2854.2 Hrs
Mileage: 46237 Miles
No Major Problems by Bombardier personnel

Vehicle 4005

Calendar Day Inspection

Calendar Day Work Order #135359 – 2/19/09
Engine Hours: A-End 3482.7 Hrs / B-End 3553.6 Hrs
Mileage: 55724 Miles
No Major Problems by Bombardier personnel

Last Reported Issues – 123706 saved erase logged memory; 116096 cab to cab not operating; 116095 B car CCTV; 105645 Noisy A/C compressor bearings; 102694 Train Operator Display removed to repair

Power Pack Preventative Maintenance

Power Pack 1k Work Order #99871 A-End /#95445 B-End – 1/9/09 completed
Engine Hours: A-End 3032 Hrs / B-End 3103 Hrs
Mileage: 51674 Miles

No Major Problems by Bombardier personnel

Last Power Pack performed at 2k Work Order #82603 A-End /#82731 B-End – 8/19/09 completed

Engine Hours: A-End 2052.1 Hrs / B-End 2122.6 Hrs

Mileage: 29480 Miles

No Major Problems by Bombardier personnel

Car Body Preventative Maintenance

Car Body 6 Month Work Order #112700 – 1/7/09 completed

Engine Hours: A-End 3158 Hrs / B-End 3212 Hrs

Mileage: 54220 Miles

No Major Problems by Bombardier personnel

Car Body 6 Week Work Order #129350 – 3/3/09 completed

Engine Hours: A-End 3158 Hrs / B-End 3212 Hrs

Mileage: 57340 Miles

No Major Problems by Bombardier personnel

Car Body 3 Month Work Order #142224 – 4/13/09 completed

Engine Hours: A-End 3874 Hrs / B-End 3946 Hrs

Mileage: 62727 Miles

No Major Problems by Bombardier personnel

Vehicle 4011

Calendar Day Inspection

Calendar Day Work Order #111140 – 1/2/09 completed

Engine Hours: A-End 3269 Hrs / B-End 3272 Hrs

Mileage: 54018 Miles

No Major Problems by Bombardier personnel

Last Reported Issues – 117895 Goose neck microphone on B car cab not transmitting; 117546 Negative Ground fault on A Car(reported on CD 12/29/08-investigated wire to entryway heater fan, removed and replaced fan with one from 4009, Ground fault clear 12/30/09); 116094 Brake pipe air lose causing traction inhibit; 110433 fire detection test failed; 109582 traction inhibit fault occurs when braking

Power Pack Preventative Maintenance

Power Pack 4k Work Order #143254 A-End /#143272 B-End – 3/19/09 completed

Engine Hours: A-End 4031 Hrs / B-End 4027 Hrs

Mileage: 68557 Miles

No Major Problems

Last Power Pack performed at 1k Work Order #93773 A-End/#93780 B-End – 11/27/08
Engine Hours: A-End 3010 Hrs / B-End 3012 Hrs

Mileage: 49243 Miles

No Major Problems by Bombardier personnel

Car Body Preventative Maintenance

Car Body 2 Year Work Order #112959 – 1/13/09 completed

Engine Hours: A-End 3361 Hrs / B-End 3364 Hrs

Mileage: 55733 Miles

No Major Problems by Bombardier personnel

Car Body 6 Week Work Order #126620 – 2/25/09 completed

Engine Hours: A-End 3785.1 Hrs / B-End 3788.4 Hrs

Mileage: 63898 Miles

No Major Problems by Bombardier personnel

Car Body 3 Month Work Order #144564 – 4/14/09 completed

Engine Hours: A-End 4266.7 Hrs / B-End 4269.8 Hrs

Mileage: 73050 Miles

No Major Problems by Bombardier personnel

Staff found there were no preventative maintenance or inspection checks for the Sprinter train audible horns to maintain at a decibel level of 85 dB. General Order 143-B Section 3.04 allows the vehicle to be equipped with 75dB horns alongside the 85 dB horns. The Vehicle Maintenance Department is currently in the process of replacing the previously installed electric horns with new air horns. Anticipated completion date is set at the end of May 2009.

Staff found that some Employee Defect Repair Forms on the Calendar Day Inspections were signed

by Veolia train operators but were missing ID numbers.

Staff found that some checklist items in the Maximo generated calendar daily inspection work orders were missing some items when compared to other work order forms. This discrepancy was brought to the attention of the Site General Manager and the exception is being resolved.

Recommendations:

1. Bombardier should include an inspection or preventative maintenance check of the horns to ensure that the audible level remains at or above 85 dB as required by General Order 143-B, Section 3.04.
2. Veolia should ensure that train operators record their ID numbers when filling out the Employee Defect Repair Forms as required by Veolia's Standard Operating Procedures.
3. Bombardier should ensure that the mileage and engine hours on calendar day inspections are filled consistently for tracking purposes in generating work order tasks through the Maximo database program as required by contractual requirements.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**13**	**Light Rail Vehicle Maintenance Training Program**	
Date of Audit	**April 29, 2009**	Department	**Vehicle Maintenance**
Auditors / Inspectors	**Vince Kwong** **Mike Borer** **Carlos Tapia**	Persons Contacted	**Tom Pate – Site General Manager** **Brian Carroll – Supervisor of Maintenance Equipment**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 13.3.1.4
2. CPUC General Order 143-B, Section 14.03
3. Bombardier: Annual Refresher Training, Class 1 Brake Test Final dated 12-1-07, Qualified Maintenance Person Written Exam – Final, Calendar Day Inspection – Final dated 12-1-07.

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

LIGHT RAIL VEHICLE MAINTENANCE TRAINING PROGRAM

Interview the Bombardier representative in charge of vehicle training and certification programs. Randomly select at least five vehicle maintenance employees and review their training records for a minimum of the past 2-years to determine whether or not:

1. The vehicle maintainer has received the required training to perform vehicle inspections
2. Records are available to show vehicle maintainer is qualified to perform inspections

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

CPUC staff interviewed the Bombardier training supervisor on activities and practices of the maintenance training and certification programs. Staff also reviewed the training presentations, certification exams, and training records.

The Qualified Maintenance Person (QMP) vehicle maintenance training program includes

familiarization with the vehicles, Calendar Day Inspections, Class 1 Brake Tests, and Blue Flag Protection. Each course requires a 1-2 hour in class conceptual presentation followed by a 1 hour practical on-the-job training with actual Sprinter trains. Training records indicate that both non revenue training and revenue service refresher require a total of 50-60 hrs. New employee qualification requires proficiency with an 80% written exam passing rate. Any missed questions are discussed with the entire class or reviewed between the trainer and the trainee. Upon demonstrating proficiency, the worker is designated as a QMP and issued an ID card (photocopy on record) requiring a refresher training course after two years.

Staff selected five vehicle maintenance employees and reviewed their training records and qualifications to perform inspections. The employee identification number, certifications and expirations are identified and no exceptions were noted by Staff.

1. Employee ID: 513
   Forklift completed 6/15/07; exp 6/15/10
   Yard and Shop Movement Operator 5/9/07 for 4 years (Test Scored 100%)
   Yard and Shop Movement Instructor 4/5/07 for 4 years
   QMP 12/20/07; exp 12/20/09 (Test Scored 100%)

2. Employee ID: 518
   Forklift completed 6/15/07; exp 6/15/10
   Yard and Shop Movement Recertification valid until 4/24/10 (Test Scored 100%)
   QMP 12/19/07; exp 12/19/09 (Test Scored 98%)

3. Employee ID: 512
   Forklift completed 9/6/06; exp 9/6/09
   Yard and Shop Movement Recertification valid until 4/20/11 (Test Scored 100%)
   QMP 12/19/07; exp 12/19/09 (Test Scored 93%)

4. Employee ID: 511
   Forklift completed 7/24/06; exp 7/24/09
   Yard and Shop Movement Recertification valid until 4/20/11 (Test Scored 100%)
   QMP 12/20/07; exp 12/20/09 (Test Scored 98%)

5. Employee ID: 525

Forklift completed 1/27/09

Yard and Shop Movement Recertification valid until 4/24/10 (Test Scored 100%)

QMP 4/18/08; exp 4/18/10 (Test Scored 98%)

Recommendation:

None

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	14	Emergency Response Agency Familiarization Program	
Date of Audit	**April 28, 2009**	Department	**Safety**
Auditors / Inspectors	**Dain Pankratz**	Persons Contacted	**Lee Kuhns – Right-of-Way Coordinator** **Dave Papworth – Chief of Transit Security**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 14.2, 14.3.2, 17.3

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

EMERGENCY RESPONSE AGENCY FAMILIARIZATION PROGRAM

Interview the NCTD representative responsible for Emergency Response Planning, Coordination, Training program and review records and documentation for the last year to determine whether or not:

1. Emergency drills that included tabletop and practical exercises were planned and carried out with the involvement of appropriate external agencies (local, state, and federal agencies)
2. Required training that included simulated emergency drills was provided to all emergency response agencies in the areas where NCTD operates.
3. All drills were performed regularly and any deficiencies were documented, scheduled and tracked to completion.
4. Emergency planning addresses both accidental emergencies as well as security related emergencies.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed NCTD's Right-of-Way Coordinator responsible for the Emergency Response Planning, Training and Coordination Program and found the following:

1. NCTD performed more than three (3) emergency response drills on the Sprinter line, including six (6) drills performed December 4-6, 2007.
2. NCTD offers familiarization training for law enforcement, fire departments and other first responders on the third Thursday of every month. NCTD also utilizes web-based power point familiarization information available for print-outs or presentation. NCTD provides the first responding agencies with diagrams and handouts detailing critical train information (power sources, evacuation locations, etc). NCTD notifies local first responders by mass email reminding them of the monthly training schedule. NCTD documentation for the familiarization information notification method was not found.
3. NCTD creates the pre-drill scenarios and follows-up with after-action reports to document the emergency response drills. The report documents the drill scenario, a list of drill participants, critical events and learning lessons resulting from the drill.
4. NCTD did not formally approve and implement the Sprinter's Emergency Response Plan (ERP). NCTD informally employs procedures from the ERP, but the plan is not yet available to all necessary stakeholders.

Recommendation:

1. NCTD should finalize and implement the Emergency Response Plan (ERP) as part of the emergency response process specified in SSPP Section 14.2.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	15	System Modification Review and Approval Process	
Date of Audit	**April 28, 2009**	Department	**Safety**
Auditors / Inspectors	**Anton Garabetian**	Persons Contacted	**Walt Stringer - Manager of Light Rail**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 15.0, 15.4.1

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

SYSTEM MODIFICATION REVIEW AND APPROVAL PROCESS

Interview NCTD staff and review appropriate records to determine whether or not:

1. NCTD has a documented system modification review and approval process with specifics of sign-off requirements and exception capability.
2. The review and approval process of proposed modifications to NCTD's rail system was properly documented (examples: Escondido Avenue Station East Platform modifications for the extension guard, relocation of station railings, etc.).

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed NCTD Light Rail Services Manager and reviewed appropriate records.

1. NCTD has a documented system modification review and approval process with specifics of sign-off requirements and exception capability. NCTD personnel bring system modification requests to the System Safety Review Committee (SSRC). The committee reviews the

request and either adopts it or refuses it.

2. NCTD documents the proposed rail system modifications. Examples: included Sprinter Cab Door /Window Security Film, Sprinter Security Camera in Operator's Cab, Sprinter Station Platform Railing Relocations projects. Escondido Avenue Station East Platform extension guard modification was part of the Sprinter project system modification subjected to then SSRC review and approval process.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	16	System Data Acquisition and Approval Process	
Date of Audit	**April 27, 2009**	Department	**Safety**
Auditors / Inspectors	**Raed Dwairi**	Persons Contacted	**Wayne M. Penn - Rail Safety and Compliance Officer** **Eric Contreras – Rail Safety Inspector / Auditor**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section Nos. 7, 15.4.1, and 16.0

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

SYSTEM DATA ACQUISITION AND APPROVAL PROCESS

Interview NCTD staff and review appropriate records to determine whether or not:

3. NCTD has a documented process for the collection and analysis of unsafe trends due to external factors that may impact the Sprinter's operations
4. The process was followed for identifying safety issues and resulted in recommendations that were implemented

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed NCTD staff in charge of system safety data acquisition and analysis and reviewed the following records:

- Sprinter C/Y 2009 First Quarter Audit Status Report for the period January 1 – March 31, 2009.
- Drug & Alcohol Internal Audit Detail Report conducted January 29, 2009 and corresponding

Transit Safe data pertaining to it.

- Selected Rail System Safety Review Committee (SSRC) Meeting minutes.
- CPUC-reportable incidents of the unsuccessful suicide on March 11, 2008 and the fatal collision with an intoxicated bicyclist on December 20, 2008.
- NCTD System Safety Program Plan, Section 7.

Staff found the following:

1. NCTD has a documented process for the collection and analysis of unsafe trends as stated in the System Safety Program Plan and reflected in the meeting minutes of the SSRC. These minutes show the CPUC designated representative to NCTD attended these meetings.
2. SSRC minutes show the process was followed for the identification of safety issues and has issued recommendations tracked to completion.
3. Near Misses or Close Calls and Dispatcher Logs are not routinely and formally discussed at the SSRC although Veolia Transportation does keep detailed and valuable records on its train operators emergency brake applications and unusual occurrences in its Dispatcher Logs. The Dispatcher Logs contain data on locations vulnerable to trespassing or intrusions and vehicles driving around grade crossing gates.

Recommendation:

NCTD should expand System Safety Review Committee scope to include safety data & unusual occurrences such as Train Operator Emergency Brake Application Reports and Dispatcher Logs collected by Veolia Transportation for analysis and mitigation of unsafe trends based as required by NCTD SSPP Section 7, 15.4.1, and 16 (same recommendation for Checklist #31).

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	17	**Interdepartmental and Interagency Coordination**	
Date of Audit	**April 30, 2009**	Department	**Safety**
Auditors / Inspectors	**Dain Pankratz**	Persons Contacted	**Wayne Penn – Rail Safety and Compliance Officer** **Walt Stringer – Manager of Light Rail** **Lee Kuhns – Right-of-Way Coordinator**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 17.0

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

INTERDEPARTMENTAL AND INTERAGENCY COORDINATION

Review NCTD's file of Sprinter Coordination Committee records for interdepartmental and interagency coordination to determine whether or not:

1. Documentation of interagency meetings and/or coordination of work between NCTD Management and various departments (Bombardier, Transit America Services, Inc.., Veolia Transportation, and other entities) and agencies exists.
2. Interagency safety related issues with corresponding recommendations have been implemented and documented.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

1. NCTD coordinates between contractors and agencies by utilizing two (2) forums, the System Safety Review Committee (SSRC) and the Monthly Sprinter Coordination Meeting.
   a. The SSRC met six (6) times in 2008: January 30, March 26, June 26, July 16, July 24 and

September 4.

b. Staff reviewed two SSRC meeting minutes and verified that all stakeholders (Bombardier, Transit America, Veolia, NCTD, Operations, etc) attend the meeting. Staff also verified that the safety & security content is resolved or tracked for future meetings.

2. The 2008 Monthly Sprinter Coordination Committee meeting was held each month. Staff reviewed the meeting minutes to verify all stakeholders attended meetings and that the safety and security content is resolved or tracked for future meetings.

3. SSRC or Sprinter Coordination Committee meetings that are unresolved during any meeting remain on the agenda until resolution or transferred to Transit-Safe database for tracking.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**18**	**Configuration Management**	
Date of Audit	**April 28, 2009**	Department	**Safety**
Auditors / Inspectors	**Anton Garabetian**	Persons Contacted	**Walt Stringer – Manager of Light Rail**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 15.0, 18.0

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

CONFIGURATION MANAGEMENT

Interview NCTD representatives who are responsible for configuration management and track a sample of changes to the rail system (eg. light rail vehicles, signal system & grade crossing warning devices, right-of-way and associated structures, passenger stations & facilities) to determine whether or not:

1. The changes made were submitted, reviewed and approved, implemented and documented in accordance with the reference criteria.
2. NCTD is actively addressing all the safety related issues stemming from the proposed changes to the rail system

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed NCTD Light Rail Services Manager and reviewed appropriate records.

Light rail vehicles, signal system & grade crossing warning devices, right-of-way and associated structures, passenger stations and facilities were all part of the original Sprinter project.

1. NCTD reviewed other changes, approved, implemented and documented them in

accordance with the reference criteria.

2. NCTD is actively addressing all the safety related issues stemming from the proposed changes to the rail system. NCTD reviews all the proposed changes at the System Safety Review Committee (SSRC) meeting.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**19**	**Employee Safety Program**	
Date of Audit	**April 29, 2009**	Department	**Safety**
Auditors / Inspectors	**Sue Feyl**	Persons Contacted	**Eric Contreras – Rail Safety Inspector / Auditor** **Lee Kuhns – Right-of-Way Coordinator** **Kevin Merlo– Transit America**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 19.0, 19.4.1, 19.4.2

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

EMPLOYEE SAFETY PROGRAM

1. Interview the NCTD representative in charge of the Employee Safety Program and review employee safety program records to determine whether or not:
   a. Appropriate procedure and reporting form have been developed for all employees to effectively report safety hazards in the work place
   b. Employees are aware of the existence of such a program and are comfortable utilizing it
   c. Appropriate corrective action plans and schedules are developed, tracked, completed and documented to address all reported hazards

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed Transit America, Veolia, and NCTD representatives and reviewed copies of reporting forms.

Transit America posts the Unusual Occurrence Report at crew locations for reporting safety hazards at the workplace. Veolia uses an Unsafe Condition Form, a Preventable Accident Form, and an Operator Incident form to track unsafe conditions. These forms are currently in use for reporting safety hazards at the work place and employees are aware of the program.

Corrective action was recently added by NCTD to the Transit America's Unusual Occurrence Report. The previous method used for corrective action tracking was via the Sprinter Monthly Operations Meeting or the System Safety Review Committee Meeting Minutes. Schedules for corrective action are usually estimated since the work is split between a number of contractors and it is difficult to establish a schedule for completion. There is no written procedure to track corrective actions however they are both tracked in NCTD's Sprinter Incident Log and the web based TransitSafe program.

Comments:

Suggestions include

- Staff suggests that NCTD provide notification to train crews via signing a sheet or radio announcements that workers, even when they are not 'expected' to foul the track, are out on a specific section of the track between certain time frames.
- Staff suggests that the training program emphasize personal cell phones usage be prohibited in train cabs or on work crews except with permission from the employee in charge.

Recommendation:

NCTD should develop a written procedure to track corrective actions identified by Transit America's Unusual Occurrence Report per NCTD SSPP Section 16.3.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	20	Environmental Protection and Hazardous Material Program	
Date of Audit	**April 29, 2009 and April 30, 2009**	Department	**Safety**
Auditors / Inspectors	**Colleen Sullivan** **Jimmy Xia**	Persons Contacted	**Tom Gallagher – NCTD Manager of Facilities Maintenance** **Jeff Conley – Veolia Transportation, Inc. Safety Manager** **Tom Pate – Bombardier Site General Manager**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 20.0
2. Bombardier PR-N-05-002 Hazardous Communication Program, dated 3-1-07.

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

ENVIRONMENTAL PROTECTION AND HAZARDOUS MATERIAL PROGRAM

Interview the NCTD manager in charge of the program for reviewing relevant documentation prepared during the last 12-months to determine whether or not:

1. The hazardous material and environmental management programs comply with the Federal, State and Local regulatory requirements.
2. Employees and contactors receive hazardous materials training
3. A program/procedure is developed and implemented for hazard reporting

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed Bombardier, Transit America, Veolia, and NCTD representatives to determine if an Environmental Protection and Hazardous Material Program is implemented and found the following.

1. NCTD (Sprinter) has contactors and subcontractors working on its system. Veolia Transportation, Inc. dispatches and operates the Sprinter trains and subcontracts to Bombardier for vehicle maintenance. Veolia is authorized to have environmental protection and hazardous material plans that are implemented system-wide. Any infrastructure that has to do with hazardous materials, such as the maintenance of the equipment, is Sprinter's responsibility. Veolia maintains the policies and standard operating procedures for the Environmental Protection and Hazardous Material Program for the entire Sprinter operation.
2. The Environmental Protection and Hazardous Material Program complies with Federal, State, and Local regulatory requirements. A program and procedure has been developed and implemented for hazard reporting.
3. Veolia has all of its permits with the Environmental Protection Agency (EPA). Train Operators, other employees, and contractors undergo training and recertification on hazardous materials and the hazardous communications program on a yearly basis.
4. Staff reviewed Veolia's training matrix which identifies training courses required by classification. Veolia follows the Code of Federal Regulations which requires a yearly re-certification. Staff reviewed the training records of various train operators, other employees, and contractors. All records were up to date and complete.
5. Copies of each individual employee confirmation of attendance (sign-in sheets) at the hazardous materials and hazardous communications program training sessions are kept on file at the NCTD's offices and at Veolia's Sprinter Operations Facilities.
6. Staff reviewed Veolia's Hazardous Material Business Plan. Veolia's hazardous materials reports are sent to NCTD's offices.
7. Staff reviewed NCTD's Hazard Communications Program and the Bloodborne Pathogen Training Program. No exceptions were noted.
8. Staff reviewed Veolia's 2008 Environmental Facility Compliance Audit. Veolia received a score of 920 which puts them in the low risk category (the best of the three categories)and means the entire facility is in compliance. Veolia has a monthly environmental compliance activities report to make sure there is no contamination in the facility. Weekly inspections are performed and these are reported in the monthly environmental compliance activities

report.

9. Bombardier Site General Manager showed Staff their Safety, Health, and Environmental Policies and Procedures Manual dated March 1, 2007 which is revised as needed. Bombardier is planning an annual review of their policies scheduled for March 2010. Bombardier personnel are required to have a annual refresher course on this policy. No exceptions were noted by Staff.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**21**	**Drug and Alcohol Policy Program**	
Date of Audit	**April 30, 2009**	Department	**Safety**
Auditors / Inspectors	**Dain Pankratz**	Persons Contacted	**Jane Arnold – Manager of Human Resources** **Jeff Conley - Veolia Safety Manager** **Kevin Merlo - Transit America Services, Inc., Manager of Safety** **Tom Pate - Bombardier, Site General Manager**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 21.0
2. 49 CFR Part 655NCTD Drug & Alcohol Policy, Program and Procedures, dated 7-1-06.
3. Transit America Services, Inc.'s FRA Control of Alcohol and Drug Use, Part 219 Railroad Compliance Plan, dated 2-14-08.
4. Veolia Transportation's Drug and Alcohol Policy
5. Bombardier Human Resources Policies and Procedures – Drug & Alcohol Policy, dated 3-3-09, rev 2.

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

DRUG AND ALCOHOL POLICY PROGRAM

1. Interview the NCTD representative in charge of the Drug and Alcohol Policy and determine whether or not NCTD's policy is in compliance with State and Federal regulations
2. Review the report from the most recent FTA audit of the NCTD Drug Prevention and Alcohol Misuse Program and the status of any corrective actions resulting from FTA recommendations to determine whether or not recommendations have been implemented.
3. Review the relevant records of employees in safety sensitive positions who tested positive for

drugs or alcohol in the past three years to determine, for each employee that tested positive, whether or not:

a. The employee was evaluated and released to duty by a Substance Abuse Professional (SAP)
b. The employee was administered a return-to-duty test with verified negative results
c. Follow-up testing was performed as directed by the SAP according to the required follow-up testing frequencies of the reference criteria after the employee has returned to duty
d. Consequences for repeat offenders were carried out as required by the reference criteria.
e. Random testing of safety sensitive employees is performed prior to the end of the one-month notification without excusing individuals for unacceptable reasons as required

4. Safety sensitive employees who have been off duty for more than 90 days have been drug tested before being allowed back to resume their duties.

5. Determine if procedures exist for dealing with employees that personally disclose to NCTD management or supervisors that they are under the influence and unfit for work

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

1. Staff interviewed the four (4) agencies (NCTD, Bombardier, Veolia, and Transit America Services, Inc.) involved in Sprinter operations to review their programs for random drug & alcohol testing, reasonable suspension, pre-employment, return to service and SAP required testing.

2. The 2008 FTA annual management information system (MIS) was reviewed by Staff. All four agencies (NCTD, Bombardier, Veolia and Transit America Services, Inc.) met the minimum random 10% alcohol & 25% drug testing rate. The previous FTA drug and alcohol audits occurred in 2004 prior to sprinter revenue and staff verified that FTA's 2004 recommendations were implemented by NCTD.

3. Staff reviewed random records of SSI Sprinter employees including six NCTD employees, two TASI employees, three Veolia employees and two Bombardier

employees.

a-d) In 2008, one-employee tested positive for drugs during a random drug test. The employee was referred to the SAP by NCTD. The employee did not complete the SAP program and was permanently released from duty.

e) Staff reviewed the times of random testing to verify testing was performed by NCTD and their contractors during all hours and different week days. Bombardier has begun testing for 3rd shift employees in 2009 by means of an on-site mobile clinic.

4. Staff reviewed the records for employees off duty for more than 90 days and verified negative test results prior to return to service.

5. NCTD and their contractor's drug and alcohol policies all refer positive random tests subjects to the SAP or possible termination. The employee is released from duty if they do not follow the SAP program or test positively again (zero tolerance). Prior to random or suspicious behavior testing, the employee can contact the employee assistance program (EAP) if they have a drug or alcohol problem.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**22**	**Contractor Safety Program**	
Date of Audit	**April 29, 2009**	Department	**Safety**
Auditors / Inspectors	**Sue Feyl**	Persons Contacted	**Jeffrey Conley – Veolia, Safety Manager** **Lee Kuhns – NCTD Right-of-Way Coordinator** **Eric Contreras – NCTD Rail Safety Inspector / Auditor** **Kevin Merlo – Transit America Manager of Safety**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 22.0
2. NCTD's Roadway Worker's Protection Plan – Power Point, dated 1-2009
3. Transit America Services, Inc.'s Roadway Worker Safety Manual, dated 3-2008
4. 49 CFR Part 214

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

CONTRACTOR SAFETY PROGRAM

Interview the NCTD representative in charge of Contractor's Safety Program and review contractor safety program records for the past year to determine whether or not:

a. Procedures and practices clearly identify, for the contractors and NCTD managers, that NCTD is in charge and that its contractors and their employees must comply with all established safety rules and procedures

b. Training has been provided to contractors and employees (to include requirements for wayside pre-work such as job briefings to ensure all workers are informed of their job duties, of their respective roles in work crew safety, and of the areas that are to be used to stay clear of trains, etc.)

c. Procedures require audits and inspections of the construction sites to monitor compliance

and adequacy with all established safety requirements

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed representatives from Transit America, Veolia, and NCTD and determined the following:

a. While the Contractor Safety Training Manual did not specifically state that NCTD is in charge, it could be clarified.
b. Staff found training is provided by NCTD to contractors and employees and Veolia provides training in Bloodborne Pathogens and Yard & Shop Safety.
c. Staff found NCTD internal audit report checked to ensure Transit America and Veolia performed inspections. In addition, Staff found numerous efficiency testing reports – almost daily – to ensure that inspections are performed by NCTD contractors as required.

Suggestions:

- Staff suggests that cell phone usage be moved into the zero tolerance section of the Contractor Safety Training Manual based on Resolution SX-88.
- Staff suggests that use of lime green vests be prohibited for wayside workers near vegetation based on the Bay Area Rapid Transit District's wayside worker fatality.
- Staff suggests that the Contractor Safety Training Manual could more clearly emphasize NCTD Safety Rules and Procedures apply to the system.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**23**	**Procurement**	
Date of Review	**April 28, 2009**	Department	**Safety**
Reviewers	**Anton Garabetian**	Persons Contacted	**Dick Berk – Mechanical Safety Officer** **Walt Stringer – Manager of Light Rail**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 23.0
2. NCTD's Procurement Policy Manual, dated 2008, revision 14
3. Veolia Transportation Procurement Quality Assurance Procedures
4. Transit America Services, Inc.'s Quality Assurance Procedures

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

PROCUREMENT

Conduct the necessary interviews and review appropriate records to determine whether or not:

1. Adequate procedures and controls are in place to preclude the introduction of defective or deficient equipment into the rail transit environment at NCTD.
2. Adequate procedures are in place to safely deal with defective or deficient equipment in the event these are introduced to the rail transit environment at NCTD

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Due to a schedule conflict, not all NCTD procurement staff responsible were present at this review scheduled on April 28, 2009.

Staff interviewed NCTD Mechanical Safety Officer on NCTD procurement practices. NCTD representative explained that Bombardier, a subcontractor to Veolia, is responsible for procurement. The NCTD representative did not have any documents on hand for review.

Staff sent NCTD on April 29, 2009 the following questions:

NCTD SSPP Section 23.2 states that NCTD has approved Veolia procurement quality assurance procedures.

1. Does NCTD have a copy of these procedures?
2. How does Veolia handle the purchased hazardous materials?
3. Is there an approval process? Are there adequate procedures and controls in place to preclude the introduction of defective or deficient equipment into the rail transit environment at NCTD?
4. Are there adequate procedures in place to safely deal with defective or deficient equipment in the event these are introduced to the rail transit environment at NCTD?
5. Is there a procedure that explains how NCTD purchases diesel fuel?

NCTD's Manager of Light Rail replied on May 12, 2009 as follows:

1. Diesel Fuel – NCTD purchases Sprinter diesel fuel via a regional bulk purchase contract which also supplies NCTD/MTS bus systems. Veolia/Bombardier provides a monthly quantity order and suggested weekly delivery day, and also oversees the delivery from the tanker truck. The three 10,000 gallon fuel tanks are located at Sprinter Operations Facility (SOF) and have both alarm and inventory level automated monitors. The NCTD procedure is a Purchase Order document.
2. Veolia/Bombardier are currently finalizing Quality Assurance (QA) procedures as virtually all parts have been procured from either the OEM (Siemens) or a recommended supplier, usually local for consumables, to preserve vehicle warranty. The Siemens Maintenance Manual is utilized to identify parts and part numbers. Parts are received and inventoried into the Storeroom and the Storekeeper and QA Tech, who have offices in the Storeroom, review them upon arrival or if any concerns arise during use. Each shop shift has a foreman on duty responsible for reviewing parts/supplies conditions or respond to any concerns. As far as hazardous materials, SOF has designated areas for fluids (such as the lube oil room) and a waste holding area (pending pickup by a disposal firm). At this time NCTD does not have a QA document to supply to staff on this topic, but will have one soon.

Recommendation:

NCTD should require Veolia to develop a written procurement procedure for NCTD approval based on NCTD SSPP Section 23.2.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**24**	**Hazard Management Program**	
Date of Review	**April 30, 2009**	Department	**Safety**
Reviewers / Inspectors	**Colleen Sullivan** **Jimmy Xia**	Persons Contacted	**Walt Stringer – Manager of Light Rail** **Wayne Penn – Rail System Safety and Compliance Officer**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 7.0, 12.3
2. CPUC General Order 164-D, Section 6.0

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

HAZARD MANAGEMENT PROGRAM

Conduct the necessary interviews and review appropriate records to determine whether or not:

1. NCTD has a process for managing hazards to its Light Rail System which is coordinated with other important activities such as accident/incident investigation and safety data collection and analysis.
2. The above process was followed to identify, categorize, and bring hazards down to acceptable levels of risk (provide specific examples).

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed the Manager of Light Rail and the Rail System Safety and Compliance Officer and determined the following:

1. NCTD has designed its internal audit process based upon the Federal Transit Administration and PUC Programs. The process is designed to rectify hazardous situations

or potentially hazardous situations at the lowest possible level. NCTD performs internal audits and inspections of its hazardous management program at least once a year; the internal audits and inspections are well documented.

2. NCTD's policy is if a hazardous situation or a potential hazardous situation exists, implement corrective action as soon as possible. NCTD's System Safety Program Plan (SSPP) is quite general with the intention of addressing a problem or potential situation.

3. NCTD follows the "three Es" – engineer hazards out (design it this way); education such as the Operation Lifesaver program; and enforcement.

4. The Rail System Safety and Compliance Officer attends the San Diego County Rail Safety Team quarterly meetings. This task force, comprised of representatives from San Diego Trolley, Inc. Burlington Northern and Santa Fe Railway, San Diego & Imperial Valley Railroad, Amtrak, NCTD, and PUC, discusses hazardous programs, incidents, and solutions to mitigate hazards on their systems.

5. NCTD provided Staff with pedestrian trespassing notices for their most hazardous situation. NCTD mitigated this hazardous situation in the engineering design phase by adding additional fencing on the mainline. NCTD also experienced slippage on their wooden pedestrian bridges due to wet or icy conditions, assessed the situation, and added a rubber mat surface to mitigate slippage.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**25**	**Calibration of Test Equipment**	
Date of Review	**April 29, 2009**	Department	**Vehicle, Wayside**
Reviewers / Inspectors	**Noel Takahara**	Persons Contacted	**Tom Pate – Bombardier Site General Manager** **Chad Baker – Transit America Services, Inc.**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 12.0
2. BTNA Services Escondido Maintenance and Operations Control of Inspection, Measuring and Testing Equipment, dated 10-3-2007
3. Transit America Services, Inc. – draft plan not issued.

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

CALIBRATION OF TEST EQUIPMENT

Interview NCTD representatives and review records, examine equipment storage facilities and perform inspections of not less than eight pieces of measuring or testing equipment to determine whether or not:

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 schedule testing/calibration due date is shown on each equipment
3. Tools and instruments requiring calibration are listed in department procedures

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed representatives from Bombardier and Transit America Services, Inc. (TASI) offices to investigate the proper calibration of test equipment being used for maintenance of the Sprinter DMU system. TASI has a small collection of measuring and test equipment among its 3 signal maintainers who are each assigned with 3 pieces of equipment. TASI follows Standard Operating Procedure (SOP) TP-101 for calibration requirements. SOP TP-101 is part of a larger document still in draft form to be finalized mid 2009. TASI utilizes Tech Master, a third party vendor, for equipment calibration services who is responsible for notifying TASI when equipment is due for calibration. Staff reviewed calibration records and found Tech Master's tracking of calibration due dates satisfactory. After Tech Master calibrates equipment, they affix a label indicating calibration status. No other exceptions were noted by Staff at TASI's review for calibration of measuring and test equipment.

Bombardier maintains a cabinet of over 30 pieces of equipment for LRV maintenance calibration. Bombardier utilizes Pacific Meteorology, a third party vendor, for equipment calibration services who is responsible for notifying Bombardier when equipment is due for calibration.

Staff reviewed calibration records and found Pacific Meteorology's tracking of calibration due dates satisfactory. After Pacific Meteorology calibrates equipment, they affix a label indicating calibration status.

Bombardier SOP Document 000001 requires that this label be affixed. Staff found the label detailing calibration status (Last Calibration Date, Next Calibration Due Date) is not affixing labels to new equipment.

Recommendation:

Bombardier should affix labels to new equipment identifying calibration status as required by Bombardier Standard Operating Procedure Document 000001.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**26**	**Power Switch Maintenance**	
Date of Review	**April 28, 2009**	Department	**Wayside Maintenance**
Reviewers / Inspectors	**Noel Takahara**	Persons Contacted	**Chad Baker – Manager of Signal Maintenance**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 11.3
2. 49 CFR Part 213, Track and Switch Inspections
3. Transit America Services, Inc. Contract 05023, Subsection 08.05.2 San Diego Subdivision Mainline Track Maintenance, dated 10-19-05.

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

POWER SWITCH MAINTENANCE

Review at least five power switch units and their inspection records completed during the last year to determine whether or not:

1. Transit America Services, Inc. inspections were performed at the required frequencies as specified in the reference criteria
2. Transit America Services, Inc. inspections were properly documented
3. Noted defects were corrected in a timely manner

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed the Manager of Signal Maintenance on power switch maintenance determined the following.

1. NCTD's Sprinter line has 33 switches, 23 power types, and the remaining electric locked hand throw operated. TASI performs track and switch inspections twice a week as required by 49 CFR Part 213. Staff reviewed the track and switch inspection reports and found they were performed at the required frequency, reports identified the inspection as visual or by Hi-Rail, and defects were corrected in a timely manner. Ultrasonic testing was last done on November 14, 2008. No exceptions were noted by Staff.
2. TASI performs power switch testing (switch obstruction, point detector) once a month as required by 49 CFR Part 236. Switch obstruction testing is done by inserting a ¼ inch obstruction at the switch point, and the test is successful if the point detector does not change with the obstruction in place. Point detector testing is a visual confirmation that the signal indicating point position is correct. Staff reviewed power switch inspection reports and found they were performed at the required frequency, and defects were corrected in a timely manner. No exceptions were noted by Staff.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**27**	**Structure/Bridge Inspections**	
Date of Review	**April 28, 2009**	Department	**Wayside**
Reviewers / Inspectors	**Noel Takahara**	Persons Contacted	**Chad Baker – Manager of Signal Maintenance**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 11.1
2. Phoenix Construction Services, Inc., Contractor for Structures Inspections - 2008

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

STRUCTURE/BRIDGE INSPECTIONS

1. Interview NCTD representatives to determine if a procedure exists for structural inspections
2. Review available records of bridge and other structural inspections at NCTD to determine whether or not these were inspected as required and remedial actions taken in a timely manner.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed Transit America Services, Inc. Manager of Signal Maintenance to determine if a procedure exists for structural inspections. Bridge / structure inspections are contracted to Phoenix Construction Services, Inc. (PCSI) for the Coaster Line and the Sprinter Line. The Sprinter Line bridge/structure inspections are scheduled mid-2009.

Staff reviewed PCSI's bridge /structure inspection work of the Coaster Line which provides commuter service between Oceanside to San Diego. PCSI catalogued and photo documented all bridges, overpasses, and tunnels. In addition, each bridge was inspected and graded using their "Bridge Inspection Report." The Bridge Inspection Report uses a 6 point grading system (1 = Excellent, 6 = Failed) of 84 line items (Masonry, Steel Bracing, Trestles, etc.). Staff noted in instances

where failure was indicated, PCSI issued recommendations for immediate action.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**28**	**Hours of Service Records**	
Date of Audit	**April 30, 2009**	Department	**Safety, Transportation, Wayside**
Auditors / Inspectors	**Don Filippi**	Persons Contacted	**Craig Bowerman – Veolia Transportation** **Chad Baker – Transit America Services, Inc. – Manager of Signals** **Tom Pate – Bombardier Site General Manager**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 12.0
2. CPUC General Order 143-B, Section 12.04

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

HOURS OF SERVICE RECORDS

Randomly select twelve combined employees from the rosters as follows:

a. Veolia Transportation - Four Train Operators, Four dispatchers/supervisors
b. Bombardier Vehicle – Four Mechanics, technicians
c. Transit America Service, Inc.'s – Two Signal Maintainers, Two Track Inspectors.

Review their hours of service records prepared during a two month period for the past year to determine whether or not:

1. Employees in safety sensitive positions did not remain on duty for more than 12 consecutive hours, or for more than 12 hours spread over a period of 16 hours.
2. The initial on duty status of each safety sensitive employee only began after 8 consecutive hours off duty.
3. A method exists to track the employees' hours of services, in situations where violations were found, were appropriately resolved by NCTD.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff reviewed hours of service records for Transit America Services, Inc. (TASI), Veolia, and Bombardier. TASI records were in order and no exceptions were noted by Staff.

Staff's review of Veolia and Bombardier records identified missing entries on time cards. A review of timecards showed the appearance of someone filling the missing information at a later date. Staff urged the three entities to inform the employees of the liability for improperly reporting hours of service due to incomplete time sheets. The two agencies did inform Staff they had addressed the issue in February 2009 and from this point forward would have an accurate record for employee's time sheets. The missing information did not result in any hours of service violations.

Recommendation:

NCTD should require Veolia/Bombardier to develop a formal process for hours of service logs to record every employee's hours of service eliminating blank entries on timesheets based on GO 143-B, Section 12.04 Hours of Service – Safety Sensitive Employee, Section 14.03 Operator Records, and Sprinter Code of Rules – Rule 1.17 Hours of Service.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	29	Safety Certification Program	
Date of Review	**April 27, 2009**	Department	**Safety**
Reviewers / Inspectors	**Anton Garabetian**	Persons Contacted	**Walt Stringer – Manager of Light Rail**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 15.5
2. CPUC General Order 164-D, Section 11.0 and 12.0

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

SAFETY CERTIFICATION PROGRAM

Interview NCTD representative in charge of the Safety Certification Program to review the current NCTD Safety Certification Plan for future or planned projects to determine whether or not the plan includes:

1. The safety certification activities to be performed in accordance with the reference criteria
2. Safety critical elements are identified, certified and properly documented
3. All design and construction changes were properly coordinated and addressed in the safety certification process
4. All safety certification activities were thoroughly documented throughout the life of the project to substantiate the safety certifiable elements, safety criteria, final design, construction, testing, operating, emergency and procedures, and training aspects have been implemented in the completed project.
5. The safety certification plan identifies submittal deadlines for the Safety Certification Verification Report in accordance with GO164-D, Section 12.0.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed NCTD's Manager of Light Rail in charge of the Safety Certification Program.

The manager provided a copy of the Sprinter Project Safety Certification Plan (SCP) and Safety and Security Certification Verification Report (SSCVR). All documentation was in order.

1. NCTD documented the safety certification activities in the SCP and SSCVR.
2. NCTD identified safety critical elements, certified and properly documented them.
3. NCTD coordinated and addressed, in the safety certification process, all design and construction changes.
4. NCTD documented and implemented, throughout the life of the Sprinter project, all safety certification activities to substantiate the safety certifiable elements, safety criteria, final design, construction, testing, operating, emergency and procedures, and training aspects.
5. The SCP does not identify submittal deadlines for the Safety Certification Verification Report as required by GO164-D however, NCTD's System Safety Program Plan (SSPP) Section 12.0 identifies deadline dates.

The manager identified two future Sprinter Projects:

a. Double-tracking entire alignment
b. 5 ½ mile extension to South Escondido

According to the Manager of Light Rail and based on SB1703, San Diego Association of Governments (SANDAG) will handle safety certification of all future projects. Sprinter's current SSPP does not include this information.

NCTD's SSPP Section 15.5 explains the history of Sprinter Project SCP. However, the SSPP does not need to reflect the project history.

Recommendation:

NCTD should revise the SSPP to include SB 1703 requirements and identify SANDAG's safety certification role of all future Sprinter projects and revise SSPP Section 15.5 to eliminate the safety certification project history.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**30**	**Unusual Occurrences Reporting**	
Date of Review	**April 28, 2009**	Department	**Safety, Maintenance, Transportation, Wayside**
Reviewers / Inspectors	**Raed Dwairi**	Persons Contacted	**Loretta Rains - Veolia Transportation Manager** **Wayne M. Penn - Rail Safety and Compliance Officer**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 16.0

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

UNUSUAL OCCURRENCE REPORTS

Interview NCTD representatives and review documentation for the previous year to determine whether or not:

1. An established program exists for documenting unusual occurrence reports identified by either train operators, wayside maintainers, dispatchers, or NCTD employees
2. The safety concern identified from an unusual occurrence report is discussed with all departments that may be effected
3. Recommendation(s) to mitigate a safety concern from reoccurring have been implemented and documented.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed the managers in charge of documenting unusual occurrences and reviewed applicable documentation. The reviewer determined the following findings:

1. NCTD has a program for documenting unusual occurrence reports such as Wayside & Grade Crossing Signal Malfunction & Unusual Occurrence Reports where activation issues and damage to crossing gates are reported and tracked to timely resolution. NCTD also maintains a Sprinter Operations Incidents spreadsheet where safety incidents and unusual occurrences are listed by date, individual reporting the incident, description, and comments/resolution status. Closed incidents are highlighted in yellow.
2. Veolia Transportation documents unusual occurrences on its Dispatcher Logs stored in digital format.
3. Veolia Transportation tracks and documents all emergency brake applications reported by its train operators. These may be utilized for training and retraining purposes, schedule delays, risk management, and track maintenance.
4. The valuable safety data collected by Veolia Transportation (items 2 & 3) are not currently part of the System Safety Review Committee (SSRC) scope and, therefore, may not be shared with all departments that may be affected. This may preclude the mitigation of safety concerns that could be identified through the analysis of emergency brake applications and dispatcher logs.

Recommendation:

NCTD should expand System Safety Review Committee scope to include safety data & unusual occurrences such as Train Operator Emergency Brake Application Reports and Dispatcher Logs collected by Veolia Transportation for analysis and mitigation of unsafe trends as required by SSPP Section 7, 15.4.1, and 16 (recommendation is identical to Checklist #16).

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**31**	**Rules Compliance and Procedures Review**	
Date of Audit	**April 29, 2009**	Department	**Safety, Maintenance, Transportation, Wayside**
Auditors / Inspectors	**Don Filippi**	Persons Contacted	**Jeff Conley – Veolia Transportation Safety Manager**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5, Section 12.0

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION

RULES COMPLIANCE AND PROCEDURES REVIEW

Interview NCTD representatives and review documentation for the previous year to determine whether or not:

1. An established program exists for documenting the adequacy and effectiveness of the rules compliance program at NCTD.
2. The program includes a segment for frequent unannounced checks of employee compliance with NCTD's Operating Rules and Procedures.
3. Ride checks/efficiency tests are being conducted to evaluate the level of compliance with rules governing signal indications, switch alignment, grade crossing protection, and/or other safety related operating practices.

6. Periodic analyses are conducted on the deficiencies identified by the unannounced checks program of employee compliance

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

Staff interviewed Veolia's Safety Manager on their policies for rules compliance and procedures reviewed. Staff found that Veolia has an established program for checks of employee compliance

and documents their activities. Veolia performs efficiency tests, check rides, training and re-certifications according to their policies. No exceptions were noted by Staff.

Recommendation:

None.

2009 CPUC SYSTEM REVIEW CHECKLIST FOR NORTH COUNTY TRANSIT DISTRICT (NCTD)

Checklist	**32**	**System Safety Program Plan Update, Control and Implementation**	
Date of Review	**April 27, 2009**	Department	**Chief Executive Officer, Department Managers, Transit Security**
Reviewers / Inspectors	**April Mulqueen** **Georgetta Gregory** **Anton Garabetian** **Joey Bigornia** **Chris Poschl** **Ariana Merlino** **Jay Ellis**	Persons Contacted	**Tom Lichterman – Director of Rail Services** **Walt Stringer – Manager of Light Rail** **Dave Papworth – Chief of Security** **Tom Gallagher – Manager of Facilities** **Eric Contreras – Rail Inspector / Auditor** **Wayne Penn – Safety and Compliance Officer** **Keith Kranda – Manager of Wayside** **Richard Berk – Chief Mechanical Officer** **Lee Kuhns – Right-of-way Coordinator** **James Davis – Veolia, General Manager** **Robert Purgavie - Transit America Services, Inc.**

REFERENCE CRITERIA

1. NCTD System Safety Program Plan (SSPP), dated 8-15-07, Revision 5.0, Section 6.0

ELEMENT, CHARACTERISTICS, AND METHOD OF VERIFICATION
SYSTEM SAFETY PROGRAM PLAN UPDATE, CONTROL AND IMPLEMENTATION Interview NCTD's Chief Executive Officer, Manager of Rail Safety & Compliance, Manager of Light Rail, Manager of Maintenance of Way, Rail Mechanical Maintenance Officer, and Chief of Transit Enforcement as a group and/or individually to evaluate the scope of Management involvement, coordination, and communication for improving the System Safety Program Plan. Specific commitments of review should include the following tasks: 1. Determine the source, frequency, and depth of safety information provided to the Chief Executive Officer 2. Determine the methods and incentives included in the management performance system to facilitate a system safety culture within the organization. 3. Determine the involvement of management in accident/hazardous condition investigations and corrective actions. 4. Determine the level where key safety decisions are made and the involvement of the management team in these decisions. 5. Determine the level and depth of Management review and follow-up on corrective actions, including those initiated by accidents, hazardous conditions, internal audits, and triennial audits.

ACTIVITIES, FINDINGS, AND RECOMMENDATIONS

Activities and Findings:

1. The NCTD Chief Executive Officer and key management personnel are paged by Station Oceanside or Station Escondido personnel immediately when serious incidents occur. More routine matters are documented by NCTD's Rail Services personnel in weekly reports, which are sent by Rail Services Department Managers to the Director of Rail Services and then to the Chief Executive Officer.
2. The System Safety Review Committee (SSRC) meets quarterly or as is necessary to review incidents, accidents, perform Hazard Analyses, and recommend Configuration Changes to management. SSRC participants include: the Director of Rail Services; Rail Safety personnel, the Managers of Maintenance of Way, Engineering, Light Rail, Security, ADA Compliance, and the IT Department; and contractors' representatives. The SSRC can meet more often, convene Task Forces, or call in experts as needed.
3. NCTD's contract requires that contractors hold monthly safety meetings. NCTD personnel attend these meetings, and most minor issues are resolved at this level.
4. NCTD holds bi-weekly cross-departmental personnel meetings to discuss safety and operational issues, and holds a weekly safety conference call with Veolia Transportation. In addition, safety issues are incorporated into the performance criteria for NCTD personnel.
5. Incidents and corrective actions are recorded by Rail Safety personnel in the Transit Safe database, and recorded on a separate Corrective Action sheet. The Corrective Action sheets are shared with upper management, and corrective actions are tracked by Rail Safety personnel until NCTD verifies that the necessary changes have been made.
6. Problems and incidents are analyzed by Rail Services and Rail Safety personnel with a Standard Hazards Resolution Matrix. Problems which cannot be remedied immediately upon discovery can be escalated to contractor's meetings, and to the SSRC if necessary; final review and funding decisions occur at the Executive level.
7. The Security Department has a Use of Force policy for its deputies. Platforms and parking lots are monitored by NCTD's Security Control Centers via closed circuit television and cameras capture activity at Emergency Call Boxes when a Box is activated. The Chief of Security is authorized to contact the Director of Rail Services directly in the event of an emergency.

Recommendation:

None.