

**PUBLIC UTILITIES COMMISSION**

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



March 14, 2012

Mr. Arthur Leahy  
Chief Executive Officer  
Los Angeles County Metropolitan Transportation Authority  
One Gateway Plaza  
Los Angeles, CA. 90012

Mr. Richard D. Thorpe  
Chief Executive Officer  
Exposition Metro Line Construction Authority  
707 Wilshire Boulevard, 34<sup>th</sup> Floor  
Los Angeles, CA. 90017

**RE: Exposition Light Rail Transit Project Safety and Security Certification Verification Report**

Dear Mr. Leahy and Mr. Thorpe:

This acknowledges receipt of the Los Angeles County Metropolitan Transportation Authority (Metro) and Exposition Metro Line Construction Authority (Expo) Safety and Security Verification Reports (SCVR) hand-delivered to the CPUC offices together by representatives of Metro and Expo on Friday, March 3. Based on statements and representations conveyed by Metro, Expo and FFP personnel, it was Rail Transit Safety Section staff's (Staff) understanding that Metro was to submit a single SCVR once it had accepted Expo's SCVR, and not two completely separate SCVRs.

Given the significant safety concerns with the design and construction of the Expo junction at Washington/Flower and ongoing problems with the Automatic Train Protection (ATP) system, prior to your agencies delivering it to our offices we advised that the SCVR was not ready to be submitted, and indicated that there are a number of safety critical issues of which you have been aware that were not resolved. A number of these remain open and are still not adequately resolved.

As discussed in the recent meeting between Expo, Metro, and our Staff, there are a number of items that continue to need attention:

- The ATP system problems should be completely resolved prior to initiating pre-revenue or revenue service. The continuing loss of communications in the system can result in more than an inconvenience or "nuisance" as Expo and Metro staff have asserted. The system should function as intended and the problems should be resolved before entering

pre-revenue service. With the very short headways and the continuing loss of signal/communication between the vehicles and the ATP system, the modified operating procedure does not sufficiently compensate for the identified safety concerns .

- Validation and, if appropriate, implementation of the proposed “rear-end release” function for trains approaching the junction. Includes testing with 3-car trains prior to pre-revenue service.
  - Modification of the 100-1 and 100-3 signals to prevent trains from entering the short blocks until the platform track is clear at Grand.
  - Testing and validation of the fix to resolve the communications loss at Farmdale Avenue crossing, and if validated, implementation of that software upgrade fix to the other crossings.
- Attached is our proposal for requirements for a monitoring program for the junction and Blue Line vehicles to assure that the concerns at the junction, and the vehicles passing through it, are monitored with findings documented, so that analysis can determine when this location will need maintenance and/or replacement.
  - Additionally, operational procedures should be adopted to ensure that:
    - trains do not exceed the speed restrictions in-place at the junction, and
    - operators departing the La Cienega Station, where trains will turn back to Los Angeles (until Expo Phase 2 is opened), call route out of the platform rather than the Rail Operations Center doing so, to insure the preemption timing is correct and prevent extensive preemption of the Hauser crossing.
  - The crossing configuration deficiencies on the exclusive alignment have been largely corrected, however there are several items that still remain uncorrected. We understand that some work is ongoing, however Staff re-inspected the crossings last week, and identified the uncorrected items. These items will be conveyed to Expo under separate cover.
  - Photos sent to CPUC Staff of the La Brea Station appear to indicate the 20 x 20-inch openings have been reduced to acceptable limits. CPUC Staff will verify this with a site visit.

Since all safety hazards have not been adequately mitigated, Metro should not begin pre-revenue operations until Expo resolves the open ATP issues. Failure of the ATP system can place the public at risk and pre-revenue operations should not be conducted until all communication failures resolved. It has long been the intent of Commission regulations to have Staff’s independent consent regarding safety before operations begin, and we hope that Metro honors this important safety provision.

Our Staff will be available to meet with Metro or Expo Staff to discuss further any of the open issues. If you have any questions, please call me at (415) 703-2349.

Arthur Leahy  
Richard Thorpe  
March 14, 2012  
Page 3 of 5

Sincerely,

A handwritten signature in cursive script that reads "Michelle Cooke". The signature is fluid and extends across the width of the page.

Michelle Cooke  
Interim Director  
Consumer Protection and Safety Division  
California Public Utilities Commission

Attachment

## Washington and Flower Diamond Requirements

- A minimum of two walking inspections of this area per week, in addition to the CFR 213 inspection requirements. The additional inspections will focus on the diamond and frog and will not be considered as meeting any additional inspection requirements. The inspections will document the condition of the frog points, rail, guardrail, and whether any evidence of unusual deterioration is present. The inspections will document the date, personnel involved, findings, and remedial actions, if any.
- A minimum of one ultrasonic test of the diamond modification and frog point per month. Documentation to be maintained including the date, personnel involved, findings, and remedial actions, if any.
- A detailed maintenance procedure that will include modification wear, condemning limits for the modification, how LACMTA intends to build up the modification, the detailed measurements of the new build-up, and how many times LACMTA plans to perform this procedure before frog replacement is warranted.
- Maintenance activities conducted on the track and frog at the diamond shall require notification to CPUC Staff at least 24 hours in advance, unless emergency maintenance is necessary to continue or reestablish service.
- The first two items above must be documented and reported to the CPUC/RTSS Supervisor within the week following the testing or inspection until the diamond is replaced, or until CPUC Staff determines that the information is no longer needed and notifies LACMTA. Such notification will come from the CPSD Director.
- Any unusual defect, problem, hazard, or incident in or near this area shall be immediately reported to the CPUC/RTSS, regardless of whether it meets the regulatory thresholds.
- For any project requiring replacement or modification of track, sub-grade, ties, ballast, switches, and frogs in or near the area of Washington and Flower Diamond, LACMTA must notify the RTSS Supervisor at least 48 hours in advance. Depending on the scope of the replacement or modification, Staff may consider it a "Major Project" under GO 164-D, requiring safety certification.

## Vehicle Maintenance Records Requirements

- LACMTA must document all vehicle damage on both scheduled and non-scheduled repairs as they relate to center pins, wheels, brake rigging, dog-bones, and any other items related to vehicle suspension. This information shall be documented and reported to the CPUC/RTSS Supervisor in a mutually agreeable format every two months.
- Any unusual repairs to vehicles shall be noted and reported to the CPUC/RTSS Supervisor every two months.
- Both items above relate to vehicles operating on both the Blue and Expo Lines. The information shall be provided until CPUC determines that the information is no longer needed or the diamond is replaced, and LACMTA is notified by the CPSD Director.
- Any discovery or suspicions of a derailment or hazardous condition that is suspected to be related to unusual wear or deterioration in the components identified above shall be immediately reported to the CPUC/RTSS, regardless of whether it meets the regulatory thresholds.

**PUBLIC UTILITIES COMMISSION**

606 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



July 13, 2012

Mr. Arthur Leahy  
Chief Executive Officer  
Los Angeles County Metropolitan Transportation Authority  
One Gateway Plaza  
Los Angeles, CA 90012

Mr. Richard D. Thorpe  
Chief Executive Officer  
Exposition Metro Line Construction Authority  
707 Wilshire Boulevard, 34<sup>th</sup> Floor  
Los Angeles, CA 90017

**RE: Washington/Flower Junction and Automatic Train Protection Defects Must Be Fixed.**

Dear Mr. Leahy and Mr. Thorpe:

By this letter you are directed to replace the frog at the Washington/Flower Junction with a new and properly designed frog, and immediately comply with the requirements in Interim Director Michelle Cooke's letter of March 14, 2012.

Consumer Protection and Safety Division (CPSD) staff has informed me that to their knowledge since this line was placed in service there have been at least two breaks in the weld that was applied to the frog, and in neither case was CPSD immediately informed of these events. Additionally, I understand that the Automatic Train Protection (ATP) system on the Exposition "Expo" Line still does not work as designed, and thus is another instance of Los Angeles County Metropolitan Transportation Authority (LACMTA) not operating under the conditions of Ms. Cooke's letter. For your convenience I have enclosed a copy of Ms. Cooke's letter.

Please provide me with a written timetable for the expedited replacement of an appropriately designed, manufactured, and installed frog for this junction by August 20, 2012. The current frog is unacceptable; it is a non-standard frog with a non-standard "fix" and a repeatedly failing weld.

Our concern is with the safety of your light rail vehicles (LRV), which in the diverging direction must travel through the non-standard and vulnerable part of the frog. If you wish, instead of expediting the frog replacement, you may cease operation through the diverging route at this frog.

Additionally, I understand that the ATP system is not operating consistent with the requirements in Ms. Cooke's letter. Please provide a timetable for fixing these defects. We have received a copy of procedures and speed reductions LACMTA has adopted in response to this situation,

*Metro Rail Operations Special Notice, Publication Number 2012-09*, dated effective July 4, 2012. Our staff will be reviewing these new instructions as written and as practiced. You should ensure that these instructions are continuously followed. You should continuously monitor and evaluate these operations, including feedback from LRV operators, to see if any changes might be needed to ensure safety. If any such changes are needed, immediately send copies to Daren Gilbert, [Daren.Gilbert@cpuc.ca.gov](mailto:Daren.Gilbert@cpuc.ca.gov), (916) 928-6858, Don Filippi, [Donald.Filippi@cpuc.ca.gov](mailto:Donald.Filippi@cpuc.ca.gov), (213) 924-3430, and Steve Artus, [Stephen.Artus@cpuc.ca.gov](mailto:Stephen.Artus@cpuc.ca.gov), (415) 703-2898.

A formal order of the Commission will follow.

Sincerely,

A handwritten signature in black ink, appearing to read "Emory J. Hagan, III". The signature is fluid and cursive, with the first name "Emory" being the most prominent.

Brigadier General (CA) Emory J. Hagan, III, Director  
Consumer Protection and Safety Division

cc: Paul Clanon, Executive Director, CPUC  
Vijay Khawani, Director of Corporate Safety, LACMTA