

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Consumer Protection and Safety Division Rail Transit Safety Section	Resolution ST-86 May 24, 2007
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RESOLUTION

RESOLUTION ST-86 GRANTING APPROVAL OF THE ANGELS FLIGHT RAILWAY COMPANY'S SAFETY CERTIFICATION PLAN FOR THE ANGELS FLIGHT RESTORATION PROJECT

Summary

This resolution grants the Angels Flight Railway Company's (AFRC) request for approval of its Safety Certification Plan (SCP) for the Angels Flight Restoration Project (AFRP).

Background

General Order (GO) 164-C, Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems, requires Rail Fixed Guideway Systems to prepare a project specific SCP for each major project and ensure that all entities involved in design, construction, operation, and maintenance of the project shall comply with the requirements of the SCP. The SCP ensures the safety critical elements identified by AFRC are planned, designed, constructed, analyzed, tested, inspected, and implemented. The SCP also ensures that training is provided for operations and maintenance and established rules and procedures are followed. GO 164-C requires AFRC to submit a written Safety Certification Verification Report (SCVR) report at the end of the project. CPUC staff (Staff) shall approve the SCVR after confirming AFRC has completed all requirements of the SCP and will send a formal letter to AFRC accepting the SCVR.

On February 13, 2007, AFRC submitted its SCP for the AFRP to CPUC Staff for review. AFRC is an inclined funicular¹ railway located on Bunker Hill in Los Angeles, California. The two cars² reciprocate at the speed of 350 feet per minute (4 mph) along a one-way 298-foot long elevated railway over a 33% grade.

AFRC has been closed since the February 1, 2001 accident which resulted in one fatality and seven injuries. The most probable cause of the accident, as identified in the National Transportation Safety Board (NTSB) Accident Report Number 916303 and the Consumer

¹ Funicular is defined as a cable railway that operates on a steep incline by simultaneously ascending and descending passenger cars that counterbalance one another by means of a common cable.

² The two cars for this system are identified as Sinai and Olivet.

Protection and Safety Division's Investigation Report dated August 23, 2002, was improper design and construction and a failure by oversight agencies to impose funicular safety standards.

On August 21, 2003, the NTSB made two recommendations to the Commission:

1. Adopt comprehensive funicular design, construction, and operation regulations that include provisions for (1) emergency stopping under all foreseeable failure modes, (2) containment of passengers in the event of a collision, and (3) emergency ingress and egress for passengers and emergency responders (R-03-14); and
2. Before certifying AFRC to restart passenger service, independently verify that the drive system meets accepted industry standards and engineering practices and the funicular includes provisions for (1) emergency stopping under all foreseeable failure modes, including track brakes or some other independent backup system on the cars to prevent a runaway car if a failure occurs in the cable or its associated braking systems; (2) containment of passengers in the event of a collision; and (3) emergency egress and ingress for passengers and emergency responders. (R-03-14 and R-03-15.)

On February 27, 2003, the Commission implemented NTSB Recommendation Number 1. The Commission revised GO164-B such that effective February 27, 2003, GO 164-C clearly defines the roles of the designers, builders, operators, and regulators. The new rules ensure that all future Fixed Rail Guideway Systems, including funiculars, incorporate existing industry standards in their design, maintenance, operation, and oversight before such systems are certified for revenue service.

On January 31, 2007, Staff and NTSB staff jointly met with AFRC staff to discuss the specific requirements of NTSB's Recommendation Number 2 and AFRC's SCP. Staff reiterated to AFRC the requirements must be met prior to re-opening of the AFRC for revenue service tentatively scheduled for late Fall 2007.

On February 26, 2007, Staff met with AFRC and their engineering team responsible for the restoration of the AFRC Project. AFRC made an SCP presentation, provided a tentative schedule with project deadlines, and gave Staff an opportunity to comment on the SCP. On February 27, 2007, Staff's comments were sent to AFRC by transmittal letter stating the following:

1. Staff requests more detail on the hazard management process,
2. Staff requests more detail on the safety certification auditing process which should include details on the format of conformance checklists as they become available,
3. Staff requests that AFRC submit a draft hazard analysis report (HAR) for Staff to review and comment on before the HAR becomes a final report, and

4. Staff requests that AFRC include greater detail in the SC Plan concerning the procedure for making updates to the SC Plan.

Staff and AFRC further agreed to:

1. On-board monitoring (e.g., event recorders) will be included on the AFRC system.
2. An emergency evacuation procedure will be developed according to NTSB recommendations.

Notices

Notice of the filing was made in the Commission's Daily Calendar, February 16, 2007.

Protests

None.

Discussion

AFRC worked with Staff to ensure their SCP is comprehensive and meets the requirements of GO 164-C, Section 7. AFRC's draft SCP submittal dated February 2007 included detailed technical documentation describing devices/items on the Certifiable Items List (CIL). The CIL includes two additional safety devices that were not present in the original completed funicular system³ such as a Safety Rope and Track Brakes.

AFRC agreed with Staff at the February 26, 2007 meeting to provide more details on an emergency evacuation procedure, hazard management process, safety certification auditing process, and conformance checklists as they become available as required by the SCP. AFRC shall file any revisions to the Commission-approved SCP with Staff for review and approval.

Comments

This is an uncontested matter in which the resolution grants the relief requested. Accordingly, pursuant to Section 311(g)(2) of the Public Utilities Code and Rule 14.6(c)(2) of the Commission's Rules of Practice and Procedure, the otherwise applicable 30-day period for public review and comment is waived.

Findings

1. On February 13, 2007, AFRC submitted the AFRP SCP to Staff for review.
2. On February 26, 2007, Staff and AFRC met and agreed to the following:

³ AFRC was originally opened in 1901 and operated until 1969. In 1993, the Community Redevelopment Agency of the City of Los Angeles financed the restoration of the Angels Flight Railway, and the attraction re-opened for revenue service on February 1, 1996.

- a. AFRC will provide more detail on the hazard management process.
 - b. AFRC will provide more detail on the safety certification auditing process which should include details on the format of conformance checklists as they become available.
 - c. AFRC will submit a draft HAR for Staff to review and comment on before the HAR becomes a final report.
 - d. AFRC will submit in detail the procedure for making updates to the SCP.
3. On February 26, 2007, Staff and AFRC agreed to the following:
- a. On-board monitoring (e.g., event recorders) will be included on the AFRC system.
 - b. An emergency evacuation procedure will be developed according to NTSB recommendations.

Therefore, IT IS ORDERED that:

1. Angels Flight Railway Company's (AFRC) request for approval of its Safety Certification Plan (SCP) for the Angels Flight Restoration project is approved.
2. AFRC shall submit SCP revisions to CPUC staff (Staff) for review and approval.
3. AFRC shall submit a written Safety Certification Verification Report to Staff upon project completion.
4. This resolution is effective today.

I certify that this resolution was adopted by the Public Utilities Commission at its regular meeting held on May 24, 2007.

/s/ PAUL CLANON
Paul Clanon
Executive Director

MICHAEL R. PEEVEY
President
DIAN M. GRUENEICH
JOHN A. BOHN
RACHELLE B. CHONG
TIMOTHY ALAN SIMON
Commissioners