Decision 89-09-023 September 7, 1989



BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Investigation on the Commission's own motion into the fire safety aspects of the rolling stock, wayside facilities, and emergency procedures of the San Francisco Bay Area Rapid Transit District.

I.85-02-007 (Filed February 6, 1985)

### **OPINION**

# Background

Following the January 17, 1979 San Francisco Bay Area Rapid Transit District (BART) transbay tube fire, the Commission instituted an investigative proceeding (Case 9867) into the circumstances surrounding the fire. BART's consultants and its executive staff participated and testified on various fire and life safety efforts being conducted and initiated by BART since the fire. An independent board of inquiry, appointed by BART, presented its findings on the investigation and recommended some 300 modifications to BART wayside equipment.

At the conclusion of these initial hearings, the Commission issued Decision (D.) 90144, directing BART to implement certain safety enhancing procedures. As a result of the Commission's directives and BART's own commitment to safety, BART formed a task force to evaluate its system-wide emergency equipment.

In September 1980, an independent fire protection engineering firm, Gage-Babcock & Associates (GBA) was retained to aid BART in formulating its fire safety program. GBA issued a report in May 1982 recommending 49 modifications to BART's wayside equipment and facilities. BART, the Commission's Safety Division staff formerly the Railroad Safety Branch of the Transportation Division (SD staff), and the Bay Area Fire Service Liaison Committee

to BART (FLC) independently reviewed the GBA report and published their positions on each of the 49 GBA recommendations.

SD staff's Draft Report, published in February 1985 evaluated the BART and FLC reports, and provided detailed analyses on all 49 recommendations. BART disagreed with SD staff and FLC on 13 of the 49 recommendations on the basis of their cost/benefit analyses.

## I.85-02-007

This proceeding was instituted for the purpose of investigating the fire safety aspects of the rolling stock, wayside facilities, and certain emergency procedures of BART. The Order of Investigation focused on three major fire safety issues:

- 1. The current status and expected completion date of BART's program to fire-harden its rolling stock.
- Resolving BART's petition for the removal of the Emergency Procedure Advisors (EPA).
- 3. Determining the status of BART's wayside fire safety improvements pursuant to the GBA recommendations.

By D.86-08-031 dated August 6, 1986 in this proceeding we authorized BART to discontinue the use of EPAs when operating totally fire-hardened trains through the Berkeley Hills tunnel and transbay tube. The discontinuance of EPAs was conditioned upon BART's implementation of a program involving maintenance by yard dispatch towers of a list of fire-hardened cars updated weekly, signing of such cars, and maintenance by BART of a current list of Foreworkers, BART Police Officers, and Supervisors who can act as substitute EPAs. D.86-08-031 also approved BART's fire hardening program. The GBA recommendations remained pending.

In issuing this investigation the Commission ordered BART to report on the timetables for completion, costs, funding sources, and fare impacts of possible improvements to wayside emergency facilities. BART submitted its report to the Commission in June

1985. Upon review, SD staff determined the need for a review by an independent consultant, having financial and other appropriate expertise to evaluate the cost effects of the GBA recommendations.

In August 1986, after discussions between BART, FLC, and SD staff, it was agreed to reject 9, and accept 31 of the 49 GBA recommendations. Nine recommendations remained in dispute since there was no agreement on these points among the parties. These were: Items 1, 2, and 5 (improved station exiting), Item 12 (permanent connection to under-car sprinkler system), Item 13 (wet underground standpipes), Item 18 (modification to Berkeley Hills tunnel standpipes), Item 25 (on-board megaphones), Item 26 (yellow phone system), and Item 30 (local controls for ventilation fans and dampers).

In September 1986 the Commission retained General Engineering Group, Inc. (GEG) to perform an independent review of the GBA recommendations. GEG submitted its final report in August 1987, presenting its own recommendations and conclusions based upon its analysis of the performance of certain GBA recommendations, along with possible alternative solutions.

The GEG report opened up a new course for discussions. The feasibility and acceptability of the 9 disputed recommendations were thoroughly discussed in subsequent BART, FIC, and SD staff meetings with the result that 8 of the 9 recommendations were totally resolved. GBA's recommendation No. 26, concerning a Yellow Phone System, was partially resolved. Since then, criteria for performance have been agreed upon by BART, FLC, and SD staff. Actual upgrading of the maintenance phone systems to the established criteria will depend on the approval of the proposal by BART's Board of Directors.

Investigation of all issues initiated by the Commission in this proceeding is complete. In its November 1988 report and its July 1989 addendum, SD staff reported on the rejected GBA recommendations, those completed, and those yet-to-be completed.

In the July 1989 addendum, SD staff suggested that a final ruling be issued, urging the following Commission action:

- 1. Commission should reconvene I.85-02-007 to receive all necessary new findings on GBA items, and issue final rulings on all 49 GBA recommendations.
- Commission should order BART to submit its final implementation plan and schedules for all ongoing GBA items.
- 3. Commission should order SD staff to work with BART to finalize and implement a safety oversight plan for all yet-to-be completed GBA items.

In July 1989 SD staff prepared and distributed its Addendum to The Staff's Final Report, providing the Commission with the revised status and SD staff position on the 49 GBA recommended modifications, with the purpose of finally closing the Commission's ongoing fire safety investigation. SD staff notes that since November 1988, considerable progress has been made towards the resolution of all GBA recommendations.

Based upon projected estimates, implementation of many of the GBA recommendations will be spread over a period of 5 to 6 years. SD staff believes that the appropriate approach to effective participation in the review of various stages of the design and the implementation of various modifications is through an oversight plan (a draft of which is attached in its July 1989 addendum).

SD staff believes that with Commission approval of the recommendations contained in its Addendum To The Final Report distributed in July 1989, all major BART fire safety issues which have been the subject of this proceeding will be resolved, and recommends that the investigation thereupon be discontinued.

A prehearing conference was held in San Francisco June 27, 1989 before Administrative Law Judge (ALJ) John Lemke. The conference was attended by members of the FLC, BART, and SD staff. It was agreed that the Final Report of the SD staff would be received as Exhibit 10, and the Addendum to the Final Report, mailed to the parties on July 7, would be received as Exhibit 11. The ALJ issued a ruling on July 13 informing the parties that they would have until July 20 to take exception to the recommendations and conclusions contained in Exhibits 10 and 11, and that absent any substantive exception thereto, he would prepare a decision urging adoption of the recommendations. A workshop meeting was conducted on July 21 among representatives from the FLC, BART, and SD staff, at which certain minor language changes in Exhibit 11 were agreed to. The changes are hereby incorporated into and will supplant the previous pages contained in Exhibit 11.

SD staff's November 1988 final report (Exhibit 10) and the Addendum (Exhibit 11) contain detailed evaluations of all 49 GBA recommendations. Additionally, Exhibit 11 contains a draft Safety Oversight Plan for the Bart Wayside Fire Safety Improvements; i.e., the GBA recommendations. The purpose of the plan is to ensure early involvement of SD staff and FLC representatives, where applicable, in the design, construction, and testing process so that specific activities are performed in accordance with applicable Commission requirements and safety standards. The plan may be implemented simultaneously with BART's own programs.

The manager of the Commission's Rail Transit Safety
Branch is responsible for preparation and implementation of the
plan. He will review, approve, and sign all written correspondence
addressed to BART concerning the activities described in the plan.
The plan sets forth a list of the GBA recommendations covered
therein, together with provisions for BART submittals and reviews,
sampling inspections, witness points, records reviews, and progress
reports. Progress reports are required under the plan annually
covering each item listed therein.

The principal purposes of this investigation have been fulfilled. We have authorized BART to discontinue the use of EPAs when operating fire-hardened cars through the Berkeley Hills tunnel and transbay tube; we have approved BART's fire-hardening program; and the Safety Oversight Plan which we are approving by this decision, set forth in Exhibit 11, will satisfactorily address the implementation status and progress of BART's wayside fire safety improvements developed pursuant to the GBA recommendations. The criteria for BART'S emergency communications systems contained in Appendix III of Exhibit 11 have been agreed to by all parties. However, approval by BART's Board of Directors is necessary before implementation can begin. This approval is expected soon.

We concur with SD staff that further hearings in this proceeding are unnecessary. The remaining wayside fire safety improvements contemplate a schedule involving several years. We will terminate this proceeding now, since the progress reports contained in the oversight plan we are adopting in Exhibit 11 will provide the necessary assurance for completion of the improvements agreed to.

BART will be directed to furnish the SD staff with its most recent implementation plans and schedules of all incomplete modifications. SD staff will be directed to consult with BART to the extent necessary to implement the oversight plan we are hereby approving. With the adoption of the oversight plan contained in Exhibit 11, this investigation may be terminated.

## Findings of Fact

1. This investigation was instituted in order to develop information concerning the fire safety aspects of BART's rolling stock, wayside facilities, and certain emergency procedures. The focus of the investigation has been concerned mainly with fire-hardening of BART's rolling stock, its petition for the removal of EPAs, and the status of its wayside fire safety improvements pursuant to the GBA recommendations.

- 2. By D.86-08-31 we authorized BART conditionally to discontinue the use of EPAs when operating totally fire-hardened trains through the Berkeley Hills tunnel and transbay tube. This same decision conditionally approved BART's car fire-hardening program.
- 3. In August 1986, after discussions between BART, FLC, and SD staff, it was agreed to reject nine, and accept 31 of the 49 GBA recommendations. Nine of the GBA recommendations remained in dispute.
- 4. Eight of the remaining nine GBA recommendations have been resolved. With respect to the ninth, concerning BART's establishment of an operating procedure and equipment testing requirement for backup phones, BART, FLC, and SD staff have agreed to minimum performance criteria for the emergency communication system. This involves an upgrading of the existing maintenance phone system to meet the new criteria, and is subject to approval by BART's Board of Directors.
- 5. Exhibits 10 and 11 contain detailed evaluations and status of all 49 GBA recommendations, including those which have been withdrawn or rejected by agreement of the parties, those completed, and those yet-to-be completed, together with the proposals for those recommendations to be implemented. Appendix II of Exhibit 11 sets forth a SD staff's Safety Oversight Plan for the BART wayside fire safety improvements; i.e., the GBA recommendations.
- 6. The oversight plan contains provisions for BART submittals and reviews, sampling inspections, witness points, records reviews, and progress reports on the CBA recommendations set forth therein.

# Conclusions of Law

1. The resolutions of the GBA recommendations, as described in Exhibits 10 and 11, are reasonable and should be approved.

- 2. The plan set forth in Appendix II to Exhibit 11 provides reasonable oversight to the adopted GBA recommendations and should be approved.
- 3. The criteria for BART's emergency communications systems contained in Appendix III to Exhibit 11 should be approved.
- 4. BART should be directed to furnish SD staff with its most recent implementation plans and schedules of all incomplete GBA recommended modifications.
- 5. SD staff should be directed to consult with BART to the extent necessary to finalize and implement the oversight plan approved by this decision.

# ORDER

#### IT IS ORDERED that:

- 1. The resolutions of the Gage-Babcock & Associates (GBA) recommendations concerning the wayside fire safety improvements of the San Francisco Bay Area Rapid Transit District (BART), as described in Exhibits 10 and 11, are approved. BART is hereby directed to proceed with these improvements in accordance with those provisions set forth in Exhibits 10 and 11.
- 2. The Safety Oversight Plan For BART Wayside Fire Safety Improvements contained in Exhibit 11 is approved.
- 3. The criteria for BART's emergency communications systems, as set forth in Appendix III to Exhibit 11, are approved.
- 4. BART is hereby directed to furnish the Commission's Safety Division staff (SD staff) with its most recent implementation plans and schedules for all incomplete GBA recommended modifications.
- 5. SD staff is hereby directed to consult with BART to the extent necessary to implement the oversight plan approved by this decision.

6. This investigation is terminated. This order becomes effective 30 days from today. Dated SEP 7 1989 , at San Francisco, California.

> G. MITCHELL WELK President FREDERICK R. DUDA STANLEY W. HULETT JOHN B., CHANIAN PATRICIA M. ECKERT Commissioners !

I CERTILY THAT THIS DECISION WAS ARROVED BY THE ABO COMMISSIONERS TODAY.

WESLEY FRANKLIN Acting Executive Director

Decision 89 09 023 SEP 7 1989

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- 2. The Safety Oversight Plan For BART Wayside Fire Safety Improvements contained in Exhibit 11 is approved.
- 3. The criteria for BART's emergency communications systems, as set forth in Appendix III to Exhibit 11 is approved.
- 4. BART is hereby directed to furnish the Commission's Safety Division staff (SD staff) with its most recent implementation plans and schedules for all incomplete GBA recommended modifications.
- 5. SD staff is hereby directed to consult with BART to the extent necessary to implement the oversight plan approved by this decision.