



# National Transportation Safety Board

Washington, D.C. 20594  
Safety Recommendation

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Date: July 20, 1990

In reply refer to: I-90-20

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About 7:36 a.m., Pacific daylight time, on May 12, 1989, Southern Pacific Transportation Company (SP) freight train 1-MJLBP-111, which consisted of a four-unit locomotive on the head end of the train, 69 hopper cars loaded with trona, and a two-unit helper locomotive on the rear of the train, derailed at milepost 486.8, in San Bernardino, California. The entire train was destroyed as a result of the derailment. Seven homes located in the adjacent neighborhood were totally destroyed and four others were extensively damaged. Of the five crewmembers onboard the train, two on the head end of the train were killed, one received serious injuries, and the two on the rear end of the train received minor injuries. Of eight residents in their homes at the time of the accident, two were killed and one received serious injuries as a result of being trapped under debris for 15 hours. Local officials evacuated homes in the surrounding area because of a concern that a 14-inch pipeline owned by the Calnev Pipe Line Company, which was transporting gasoline and was located under the wreckage, may have been damaged during the accident sequence or was susceptible to being damaged during wreckage clearing operations. Residents were allowed to return to their homes within 24 hours of the derailment.

About 8:05 a.m., on May 25, 1989, 13 days after the train derailment, the 14-inch pipeline ruptured at the site of the derailment, released its product, and ignited. As a result of the release and ignition of gasoline, 2 residents were killed, 3 received serious injuries, and 16 reported minor injuries. Eleven homes in the adjacent neighborhood were destroyed, 3 received moderate fire and smoke damage, and 3 received smoke damage only.

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In addition, 21 motor vehicles were destroyed. Residents within a four-block area of the rupture were evacuated by local officials.<sup>1</sup>

Although the City of San Bernardino had developed a general plan for land use, which was the framework for decisions by the City on the use of its land for the protection of residents from natural and man-caused hazards, the use of land in proximity to mainline railroads or high pressure pipelines was not addressed in the general plan or in subsequent revisions to the plan. The Safety Board believes that city and county officials should take into account the location of railroads and high pressure pipelines when developing a general plan for land use. Furthermore, the Safety Board believes that the National Association of Counties and the National League of Cities are the appropriate organizations to inform their members of the circumstances of the train derailment and subsequent pipeline rupture and to urge their members to account for the location of mainline railroads and high pressure pipelines during the development of plans, or during revisions to existing plans, that address policies and objectives for land use.

The Safety Board has previously expressed concern about the development of residential lots near pipelines. As a result of its investigation of the liquefied petroleum gas pipeline rupture in West Odessa, Texas,<sup>2</sup> the Safety Board issued Safety Recommendation P-84-27 asking that the National Association of County Administrators and the National Council of County Association Executives "...urge [their members] to develop measures to preclude the development of residential lots over pipelines transporting hazardous liquids or gases or of lots on which construction will necessarily encroach on easements for the pipelines." The Safety Board has not received a substantive response to the recommendation despite efforts to solicit a response. Consequently, Safety Recommendation P-84-27 has been classified "Closed--Unacceptable Action."

As a result of its investigation of the accident in West Odessa, Texas, the Safety Board also issued the following Safety Recommendation P-84-28 to the American Land Development Association:

Advise its members of the circumstances of the accident near West Odessa, Texas, on March 15, 1983, and urge them to cooperate with local government land planning and zoning agencies in the development and implementation of restrictions against the development of residential lots over pipelines transporting hazardous liquids or gases or of lots on which construction will necessarily encroach on easements for the pipelines.

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<sup>1</sup>For more detailed information, read Railroad Accident Report-- "Derailment of Southern Pacific Transportation Company Freight Train on May 12, 1989, and Subsequent Rupture of Calnev Petroleum Pipeline on May 25, 1989, at San Bernardino, California" (NTSB/RAR-90/02).

<sup>2</sup>Pipeline Accident Report--"Mid America, Pipeline System Liquefied Petroleum Gas Pipeline Rupture, West Odessa, Texas, March 15, 1983" (NTSB/PAR-84/1).

The Safety Board also issued Safety Recommendation P-84-30 to the National Academy of Sciences asking that it:

Assess the adequacy of existing public policy for surface and subsurface use of land adjacent to pipelines that transport hazardous commodities to provide reasonable public safety. Based on the findings of the assessment, develop a recommended policy to correct identified deficiencies in current policy.

Despite followup efforts by the Safety Board to ascertain what actions were taken, neither the American Land Development Association nor the Urban Land Institute responded to Safety Recommendation P-84-28 (the recommendation was classified as "Closed--Unacceptable Action" in May 1989). In response to P-84-30, however, the Transportation Research Board of the National Research Council completed a report "Pipelines and Public Safety" (Special Report 219) that examines ways in which pipeline accidents caused by land development too near pipelines could be averted by more effective land-use policies. The report also provides a synthesis of policies and practices for enhancing public safety near pipelines through damage prevention programs and emergency preparedness programs, as well as land-use measures. The recommended actions in this report are specifically directed to public safety and land-use issues for pipelines, but the Safety Board believes, in principle, the discussion on land use would also apply to railroads. Moreover, many of the considerations on land-use limitations for property adjacent to pipelines but not yet developed, also should be applied to land adjacent to railroads that has not yet been developed. Consequently, the Safety Board believes that the report could prove useful to local officials and it encourages the National Association of Counties and the National League of Cities to inform their respective members of the guidance available in the report and to encourage them to develop and implement policies on the use of lands adjacent to railroads and pipelines that are designed to protect public safety.

Therefore, the National Transportation Safety Board recommends that the National Association of Counties and the National League of Cities:

Inform your members of the land-use guidance for enhancing public safety contained in the National Research Council's Special Report 219, "Pipeline and Public Safety," and encourage them to develop and implement policies to protect public safety for lands adjacent to pipelines and railroads. (Class II, Priority Action) (I-90-20)

Also, the Safety Board issued Safety Recommendations R-90-12 through -21 to the Southern Pacific Transportation Company; R-90-22 through -25 to the Federal Railroad Administration; R-90-26 and -27 to the Association of American Railroads; P-90-22 and -23 to the Calnev Pipeline Company; I-90-18 and -19 to the City of San Bernardino; and P-90-24 and -25 to the Research and Special Programs Administration. The Safety Board also reiterated Safety Recommendations P-84-26, P-87-6, P-87-7, and P-87-22 to the Research and Special Programs Administration, and R-89-50 to the Federal Railroad Administration.

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "... to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law-633). The Safety Board is vitally interested in any action taken as a result of its safety recommendations. Therefore, it would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendation I-90-20 in your reply.

KOLSTAD, Chairman, COUGHLIN, Vice Chairman, and LAUBER and BURNETT, Members, concurred in this recommendation.



By: James L. Kolstad  
Chairman