



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Log B 100E

Date: February 12, 1990

In reply refer to: R-89-84
through R-89-87

Honorable Russell J. Ritter
Mayor of Helena
City/County Administration Bldg.
316 North Park Avenue
Helena, Montana 59623

About 4:30 a.m. mountain standard time on February 2, 1989, freight cars from Montana Rail Link Inc. (MRL) westbound train 1-121-28 (train 121) rolled eastward down a mountain grade and struck a stopped helper locomotive consist, Helper 1, in Helena, Montana. The locomotive consist of train 121 included three helper units (Helper 2) and three road units positioned at the head end of a 49-car train. The crewmembers of train 121 had uncoupled the locomotive units from the train to rearrange the locomotive consist while stopped on a mountain grade. In the collision and derailment, 15 cars from train 121 derailed, including 3 tank cars containing hydrogen peroxide, isopropyl alcohol, and acetone. Hazardous material released in the accident later resulted in a fire and explosions. About 3,500 residents of Helena were evacuated. Two crewmembers of Helper 1 were only slightly injured. The estimated damage (including clean-up and lading) as a result of this accident exceeded \$6 million.¹

The National Transportation Safety Board determined that the probable cause of this accident was the failure of the crew of train 1-121-28 to properly secure their train by placing the train brakes in emergency and applying hand brakes when it was left standing unattended on a mountain grade. Contributing to the accident was the decision of the engineer of Helper 2 to rearrange the locomotive consist and leave the train unattended on the mountain grade, and the effects of the extreme cold weather on the airbrake system of the train and the crewmembers. Also contributing was the failure of the operating management of the Montana Rail Link to adequately

¹ For more detailed information, read Railroad Accident Report-- "Collision and Derailment of Montana Rail Link Freight Train with Locomotive Units, and Hazardous Materials Release at Helena, Montana, February 2, 1989." (NTSB/RAR-89/05)

assess the qualifications and training of employees placed in train service. Contributing to the severity of the accident was the release and ignition of hazardous materials.

The initial notice from MRL was made to the HPD dispatcher about 0431 by the yard clerk. Although the clerk did not request assistance at that time, he said he would call back if there was anything else to report. During this period, the HPD dispatcher did not advise the HFD or request the assistance of the HPD or HFD to investigate the accident. Following the explosion the MRL yard clerk could not contact the HPD dispatcher. The yard clerk and the assistant trainmaster then drove to the HPD headquarters; however, they could not get in to see the dispatcher. This delay resulted in the loss of time and hampered the emergency response personnel. About 5 to 15 minutes before the explosion occurred, the HPD dispatcher received two "complaints" of a "small accident" at the railroad's Benton Avenue crossing. Still the HPD dispatcher did not dispatch personnel to investigate the accident. Primarily due to the disruption of the radio and telephone communications in Helena, local safety officials were not advised by MRL of the hazardous materials involvement in the derailment until after 0500, 30 minutes following the derailment, when another yard office clerk called the HPD dispatcher and requested that someone come to the yard office to pick up hazardous materials information.

Although MRL did not initially request assistance, the HPD dispatcher should have dispatched the HPD to investigate the situation to determine if the city needed to be involved. The Safety Board believes that the City of Helena and MRL should cooperate to develop specific instructions and procedures for responding to reports of railroad accidents. At a minimum, these procedures should address the initial notification, the actions to take when responding to a release of hazardous materials, the identification of key contact personnel, the need for emergency drills, and the identification of resources and actions to be taken by railroad personnel and the city.

During the first several hours, the incident commander was without the benefit of effective telephone/radio communications. As a result, command and control were adversely affected by the lack of effective communications links between all of the responding agencies. The power outage disrupted the power supply of the radio repeater on Mt. Helena, which provided radio communications to city emergency response personnel, and also the telephone switchboard in the city/county building. The Safety Board believes that the City of Helena needs to install a reliable independent emergency power supply source at its Mt. Helena radio repeater for radio/telephone communications.

The Hazardous Materials Emergency Response Plan (HMER) designates the [acting] fire chief as the incident commander and all response actions are to be under one command. The incident commander could not implement the

incident command system² during the absence of radio communications and therefore was unable to effectively exercise control over the multiple command posts for the city, county, and state. As a result, there was a break down in communications and lack of coordination at the communications center, command posts, and operations center. The lack of training of some of the responding agencies on the incident command system further compounded problems as some of the responding agencies did not know that with the incident command system the [acting] fire chief was the incident commander. As a result, many of the emergency responding agencies were unaware of the HFD command post, had difficulty obtaining information, and did not recognize anyone as being in overall command. The Safety Board believes that the City of Helena needs to coordinate with Lewis and Clark County DES and Montana DES and revise the Hazardous Materials Emergency Response Plan defining the role of each agency, the duties and authority of the incident commander, and the training for personnel to implement the plan.

Therefore, the National Transportation Safety Board recommends that the City of Helena:

Develop, in cooperation with Montana Rail Link, specific instructions and procedures for responding to reports of rail accidents. (Class II, Priority Action) (R-89-84)

Review and revise, in cooperation with Montana Rail Link, the emergency response procedures to address handling the unintentional release of hazardous materials. (Class II, Priority Action) (R-89-85)

Install a reliable independent emergency power supply source for the Mt. Helena radio repeater for radio/telephone communications. (Class II, Priority Action) (R-89-86)

Cooperate with Lewis and Clark County Disaster and Emergency Services (DES) and Montana DES, to revise the Hazardous Materials Emergency Response Plan to define the role of each agency, the duties and authority of the incident commander, and the training for personnel to implement the plan. (Class II, Priority Action) (R-89-87)

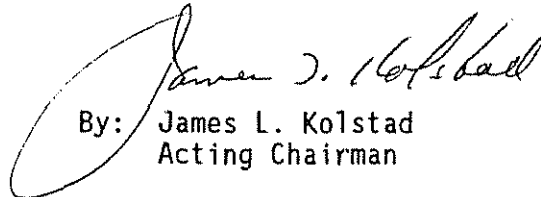
Also as a result of its investigation of this accident, the Safety Board issued Safety Recommendations R-89-68 through R-89-77 to Montana Rail Link, Inc., R-89-78 and R-89-79 to the Burlington Northern Railroad Company, R-89-80 to the Secretary of the U.S. Department of Transportation, R-89-81 and R-89-82 to the Federal Railroad Administration, R-89-83 to the Research and Special Programs Administration, R-89-88 to the State of Montana, R-89-89 to the Lewis and Clark County Disaster and Emergency Services, and R-89-90

²The incident command system provides for emergency management by the incident commander who has liaison with other agencies, directs the use of equipment, designates management of activities through other qualified officers, and has liaison with on-scene technical experts.

through R-89-92 to the Association of American Railroads.

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 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations and would appreciate a response from you regarding action taken or contemplated with respect to the recommendations in this letter. Please refer to Safety Recommendations R-89-84 through R-89-87 in your reply.

KOLSTAD, Acting Chairman, and BURNETT, LAUBER, NALL, and DICKINSON, Members, concurred in these recommendations.


By: James L. Kolstad
Acting Chairman