

ADOPTED: 2/12/90



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

I-961

Date: March 23, 1990

In reply refer to: I-90-16 and -17

Mr. Bobby R. Burkett
Director
Florida Highway Patrol
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Tallahassee, Florida 32301

About 11:30 a.m., on November 30, 1988, a tractor-flatbed semitrailer operated by Hy Yield Bromine Company overturned at the intersection of two farm roads in a sparsely populated area of Collier County, Florida. The semitrailer was loaded with 32 cylinders of a poisonous and toxic by inhalation mixture, 98 percent methyl bromide and 2 percent chloropicrin. Eleven of the cylinders were full, each containing about 1,500 pounds of the poisonous mixture, and the remainder of the cylinders were partially full or empty except for residue. The driver had completed the second of four scheduled stops when the accident occurred.¹

As the vehicle overturned onto its left side, the front of the tractor struck a tree and some of the cylinders and sidepanels on the semitrailer were ejected from the vehicle. Several cylinders struck trees in the wooded area adjacent to the accident site and one cylinder was punctured. Several emergency response personnel reported symptoms associated with exposure to methyl bromide and chloropicrin as a result of their activities on and near the accident scene, and were provided medical treatment.

Shortly after 11:30 a.m., the supervisor of a nearby fruit farm came upon the accident site. After determining that the driver needed help, the supervisor drove to his home about 2,000 feet south of the accident site and asked his wife to call for emergency help. At 11:35 a.m., the supervisor's wife called 911 and reported the accident to the Collier County Sheriff's dispatcher. She reported that the driver was pinned in the vehicle and bleeding badly, and she recommended that a medical helicopter be sent.

A Collier County Emergency Medical Services (EMS) vehicle, a Collier County Sheriff's deputy, Golden Gate Fire Control and Rescue District (Golden

¹For more detailed information, read Hazardous Materials Accident Report--"Puncture of a Cylinder Containing a Mixture of Methyl Bromide and Chloropicrin Following the Overturn of a Tractor/Semitrailer, Collier County, Florida, November 30, 1988" (NTSB/H2M-90/01).

Gate) units, and Big Corkscrew Island Fire Control and Rescue District (Big Corkscrew Island) units were dispatched to the accident scene.² The responding Sheriff's deputy asked the county dispatcher to contact the Florida Highway Patrol (FHP) to see if they could also respond to the accident.

A FHP trooper and auxiliary trooper who were on routine patrol in a single cruiser overheard radio communications between the deputy and the county dispatcher. The radio communications were heard on the trooper's personal scanner. The trooper did not have radio equipment necessary to communicate directly with the county; therefore, the trooper contacted the FHP dispatcher and advised the dispatcher to expect a call from the county. The trooper then proceeded to the accident scene with lights and siren on.

About 11:44 a.m., the county dispatcher notified responding units that methyl bromide was involved in the accident, and the North Naples Fire Control District hazardous materials response team was dispatched. The county dispatcher warned responding units that the material was an extremely deadly gas and that breathing apparatus should be used when approaching the accident scene. However, both the trooper and auxiliary trooper later said that once the siren was turned on, they were not able to hear any radio transmissions over the scanner; and they did not know that hazardous materials was involved in the accident when responding to the scene.

A few minutes later, a Sheriff's deputy reported to the county dispatcher that a trooper had passed him en route to the accident scene and asked the dispatcher if the trooper was aware of the situation. (Because of differences in radio equipment, the deputy could not communicate directly with the trooper, and he was concerned that the trooper did not know that chemicals were involved in the accident.) The county dispatcher believed that the trooper was aware of the chemical involvement, but called the FHP dispatcher by telephone to be certain.

The FHP dispatcher was monitoring a scanner and she was aware of the chemical involvement. She believed that the trooper also had been listening to the scanner, and she believed that he was also aware that chemicals were involved in the accident. Therefore, the FHP dispatcher did not directly transmit any information about the methyl bromide involvement to the responding trooper.

As the trooper approached the accident scene about 12 p.m. from the north on Desoto Boulevard, he saw several civilians standing at the intersection of 10th Avenue, S.E., and pointing east. The trooper turned east, observed a medical helicopter overhead, and drove about 3,000 feet to the end of the street. He then looked south on Manatee Road and saw the overturned tractor/semitrailer. The trooper drove toward the overturned tractor/semitrailer and parked his car about 125 feet north of the

² Golden Gate Fire and Rescue District and Big Corkscrew Island Fire and Rescue District are response units of Collier County.

overturned vehicle. The auxiliary trooper advised the FHP dispatcher that they were on scene.

While tending the driver, who was trapped in the vehicle, the trooper saw blue cylinders scattered on the ground around the semitrailer. The trooper asked a nearby farm worker if he knew what was in the cylinders. The man responded that it was a pesticide used by farms, and the auxiliary trooper recalled that the man said, "there is no danger, because if it is leaking we would smell it." Both the trooper and the auxiliary trooper stated that they smelled diesel fuel at that time, but they did not smell any chemicals.

Because of its physical characteristics, it is likely that the methyl bromide and chloropicrin mixture in the punctured cylinder rapidly turned to gas and that some of the toxic gas collected in the ditch adjacent to the truck before dissipating. Thus, the trooper was probably exposed to some of the toxic gas when he left the tractor and went into an adjacent ditch. Additionally, because of the direction of the wind, it is possible that the auxiliary trooper and two fire and rescue personnel who extricated the driver were exposed to some of the residual gas as it dissipated.

The Collier County 911 dispatcher received timely notification that methyl bromide was involved in the accident and promptly warned all responding county deputies, fire and rescue personnel, and EMS personnel about dangers involved with the cargo. Consequently, these response personnel approached the accident site with caution and stayed clear of the accident vehicle until equipped with self-contained breathing apparatus.

However, because there is no radio channel common to Collier County and the FHP, two troopers responding to the accident site did not receive timely notification that hazardous materials were involved and consequently were unnecessarily exposed to a hazardous environment. Had the county dispatcher or responding deputies been able to communicate directly with the troopers, it is likely that they too would have approached the accident site with appropriate caution and avoided the risk of exposure. Furthermore, because of the threats posed to public safety and emergency responders when accidents involve hazardous materials, and the potential for worsening or rapidly changing conditions, it is important for responders to be able to clearly and quickly communicate important information. Therefore, the Safety Board believes that the FHP should establish, in conjunction with counties, radio channels common to the FHP and county emergency response agencies.

Because the FHP dispatcher knew that the responding troopers had a personal radio scanner in their car capable of monitoring county radio communications, she incorrectly assumed that they knew methyl bromide was involved in the accident. Consequently, she believed it was unnecessary to warn them and failed to confirm that they heard the county's warning. However, because of the serious consequences that can result when emergency responders enter a hazardous materials accident site unprotected, it is imperative that dispatchers not assume anything and confirm that responders have all available vital information pertaining to the hazardous materials involvement. Therefore, the Safety Board believes that the FHP should

review dispatcher training and, as necessary, modify instructions to require that dispatchers confirm that responders have all available vital information pertaining to hazardous materials involved in accidents.

Therefore, the National Transportation Safety Board recommends that Florida Highway Patrol:

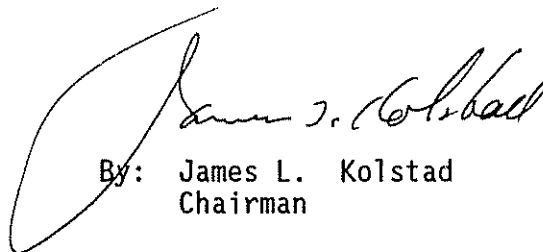
Establish, in cooperation with counties, radio channels common to the Florida Highway Patrol and county emergency response agencies. (Class III, Longer Term Action) (I-90-16)

Review dispatcher training and, as necessary, modify instructions to confirm that responders are provided all available vital information pertaining to hazardous materials involved in accidents. (Class II, Priority Action) (I-90-17)

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 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 recommendations in this letter. Please refer to Safety Recommendations I-90-16 and -17 in your reply.

Also, the Safety Board issued Safety Recommendations H-90-8 and -9 and I-90-1 to the Hy Yield Bromine Company; I-90-2 through -4 to Manchester Tank and Equipment Company, Inc.; I-90-5 through -12 to the Research and Special Programs Administration of the U.S. Department of Transportation; and I-90-13 through -15 to Collier County, Florida.

KOLSTAD, Chairman, COUGHLIN, Acting Vice Chairman, and LAUBER and BURNETT, Members, concurred in these recommendations.



By: James L. Kolstad
Chairman