



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

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**Date:** October 27, 2009

**In reply refer to:** P-09-4

Mr. Cleveland Peebles  
President  
Clarke County Board of Supervisors  
P.O. Box 616  
Quitman, Mississippi 39355

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The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating transportation accidents, determining their probable cause, and making recommendations to prevent similar accidents from occurring. We are providing the following information to urge your organization to take action on the safety recommendation in this letter. The NTSB is vitally interested in this recommendation because it is designed to prevent accidents and save lives.

This recommendation addresses emergency communications and preparedness in Clarke County, Mississippi. The recommendation is derived from the NTSB's investigation of the November 1, 2007, rupture in Carmichael, Mississippi, of the liquid propane pipeline operated by Dixie Pipeline Company and is consistent with the evidence we found and the analysis we performed. As a result of this investigation,<sup>1</sup> the NTSB has issued eight safety recommendations, one of which is addressed to the Clarke County Board of Supervisors. Information supporting this recommendation is discussed below. The NTSB would appreciate a response from you within 90 days addressing the actions you have taken or intend to take to implement our recommendation.

On November 1, 2007, at 10:35:02 a.m.<sup>2</sup> central daylight time,<sup>3</sup> a 12-inch-diameter pipeline segment operated by Dixie Pipeline Company (Dixie) was transporting liquid propane at about 1,405 pounds per square inch, gauge, when it ruptured in a rural area near Carmichael, Mississippi. The resulting gas cloud expanded over nearby homes and ignited, creating a large fireball that was heard and seen from miles away. About 10,253 barrels (430,626 gallons) of

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<sup>1</sup> For additional information, see <<http://www.nts.gov/publictn/2009/PAR0901.pdf>>. *Rupture of Hazardous Liquid Pipeline With Release and Ignition of Propane, Carmichael, Mississippi, November 1, 2007*, Pipeline Accident Report NTSB/PAR-09/01 (Washington, DC: National Transportation Safety Board, 2009).

<sup>2</sup> The times associated with events indicated in hours:minutes:seconds are from either the Supervisory Control and Data Acquisition system or the 911 system.

<sup>3</sup> All times are central daylight time except where otherwise noted.

propane were released. As a result of the ensuing fire, two people were killed and seven people sustained minor injuries. Four houses were destroyed, and several others were damaged. About 71.4 acres of grassland and woodland were burned. Dixie reported that property damage resulting from the accident, including the loss of product, was \$3,377,247.

The NTSB determined that the probable cause of the November 1, 2007, rupture of the liquid propane pipeline operated by Dixie Pipeline Company near Carmichael, Mississippi, was the failure of a weld that caused the pipe to fracture along the longitudinal seam weld, a portion of the upstream girth weld, and portions of the adjacent pipe joints.

The first 911 call received at Clarke County Central Dispatch came in at 10:39:56 a.m. The call was from a person calling from a house at 4195 County Road 621. The caller reported that a gas explosion had occurred somewhere around the area and that smoke and gas surrounded the house. When asked if there was fire, the caller said that she did not see any fire but she saw white gas and smelled gas. The 911 operator told the caller that an emergency responder would be sent. The operator did not tell the caller to get out of the house and run away from the smoke. The call lasted 1 minute 20 seconds. The house at this address was subsequently identified as the house in which one of the two fatalities was discovered.

The initial training and qualification of Clarke County Central Dispatch operating personnel does not address pipeline emergencies. The training consists of both formal classroom instruction and an on-the-job instructional regimen in which new personnel are closely monitored and supervised by experienced operating personnel. The classroom and on-the-job training includes instruction about processing emergency calls and about obtaining information from callers regarding the nature of the incident, the location, and the current situation. Trainees receive guidance about providing instructions to the caller to avoid or escape from danger or harm. Trainees also receive information about available resources, such as caller ID and maps, that may be useful in responding to emergency calls.

Clarke County Central Dispatch personnel have not participated in drills and exercises simulating a propane pipeline rupture, a substantial product release, and subsequent ignition and fire. They have routinely participated in scheduled preparedness drills and training exercises that have been conducted on the local level within Clarke County and on occasion by neighboring counties and state agencies, such as the highway patrol. However, there is no indication that any of these exercises involved a pipeline accident or emergency.

Clarke County Central Dispatch personnel did not receive familiarization training sponsored by Dixie that specifically covered the operation of a propane or other large pipeline, nor did they receive Dixie's booklet, *A Guideline for Emergency Response Agencies*, or two other safety publications that Dixie routinely distributed to emergency response agencies. Dixie's outreach program to emergency response agencies provided opportunities for emergency responders in Clarke County and neighboring counties to receive familiarization training and participate in exercises related to the propane pipeline so that they would be prepared in case of accident or emergency. Training participants and invitees received safety literature and guidance that contained important information about the hazards of propane and actions

to protect the public and emergency responders. These materials also contained specific guidance that 911 operators could use to recognize the signs of a massive propane release and the information to give to callers so they can avoid danger during such a release. However, Dixie did not identify central dispatch centers, such as Clarke County Central Dispatch, as stakeholders and participants in its outreach program for emergency response agencies. In the 3 years before the Carmichael accident, employees of the Clarke County Sheriff's Department, the County Emergency Management Agency, and the Carmichael Volunteer Fire Department attended Dixie's emergency response training sessions, but Clarke County Central Dispatch was not included in the list of attendees to this type of session and the Clarke County 911 operators did not attend. Had personnel from Clarke County Central Dispatch participated in Dixie's periodic familiarization training or received the guidance to 911 operators, they may have promptly recognized that the information initially reported indicated a massive propane release in the area and would have been better prepared to address it. Such actions may have included warning callers to avoid ignition sources and telling them to immediately evacuate the area.

The first call reporting a gas explosion to Clarke County Central Dispatch came in about 5 minutes after the pipe rupture, and the ignition of the released propane occurred about 2 1/2 minutes after that. Although Clarke County Central Dispatch personnel paged fire resources to respond to the scene and told the caller that a fire truck was on its way, they did not tell the caller what to do in the meantime to respond to the emergency. Given the circumstances of this accident, however, even if the dispatcher receiving the call had instantly recognized the impending danger, warned the caller not to use any ignition sources, and directed the caller to immediately evacuate and get away from the gas cloud, the caller at best would have had very little time to reach safety before the ignition and fire. Nevertheless, Clarke County Central Dispatch personnel need to be able to assess the significance of telephoned descriptions of pipeline emergencies so that they can give callers the correct information about how to keep themselves safe. Heightened awareness and knowledge attained through appropriate training and participation in drills involving pipeline operators and other local emergency response agencies can improve the ability of Clarke County Central Dispatch to provide timely information and guidance to citizens and county emergency response agencies in future emergencies. The NTSB concludes that at the time of the accident, the Clarke County Central Dispatch emergency 911 personnel were not sufficiently knowledgeable about the dangers of a large release of propane and the appropriate actions to take.

Therefore, the National Transportation Safety Board makes the following recommendation to the Clarke County Board of Supervisors:

Require and document that the Clarke County Central Dispatch emergency 911 personnel receive regular training and participate in regional exercises and drills pertaining to pipeline safety. (P-09-4)

The NTSB also issued safety recommendations to the Pipeline and Hazardous Materials Safety Administration, the American Petroleum Institute, and Dixie Pipeline Company. In response to the recommendation in this letter, please refer to Safety Recommendation P-09-4. If you would like to submit your response electronically rather than in hard copy, you may send it to the following e-mail address: [correspondence@ntsb.gov](mailto:correspondence@ntsb.gov). If your response includes

attachments that exceed 5 megabytes, please e-mail us asking for instructions on how to use our secure mailbox. To avoid confusion, please use only one method of submission (that is, do not submit both an electronic copy and a hard copy of the same response letter).

Chairman HERSMAN, Vice Chairman HART, and Member SUMWALT concurred in this recommendation.

*[Original Signed]*

By: Deborah A.P. Hersman  
Chairman