



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: November 18, 1998

In reply refer to: P-98-39

Mr. Anthony L. Botterwerk
President
Koch Pipeline Company, LP
411 E. 37th Street, North
Wichita, Kansas 67220

On Saturday, August 24, 1996, about 3:26 p.m., an 8-inch-diameter steel LPG (liquefied petroleum gas) pipeline transporting liquid butane, operated by Koch Pipeline Company, LP (Koch), ruptured near Lively, Texas, sending a butane vapor cloud into a surrounding residential area.¹ The butane vapor ignited as two area residents in a pickup truck drove into the vapor cloud. The two people died at the accident site from thermal injuries. About 25 families were evacuated from the affected area. Koch estimated its direct pipeline losses, including the loss of product from the line, to be about \$217,000. Other property losses included damage to the roadway under which the rupture occurred and damage to a pickup truck, a mobile home, several outbuildings, and adjacent woodlands.

The National Transportation Safety Board determined that the probable cause of this accident was the failure of Koch to adequately protect its pipeline from corrosion.

A catastrophic corrosion failure occurred in an area of the pipeline where significantly less corrosion had been identified by an internal inspection tool about 15 months earlier. When buried pipe was exposed in 1995 after this internal inspection, Koch recorded low pipe-to-soil potentials, many of which were below the company standard for cathodic protection. In addition, stress cracking and disbonded coating were observed at numerous locations and recorded in the exposure reports. Despite these indications, Koch did not ensure that cathodic protection levels were restored to the company standard.

Excavations made as a result of the accident and during the 1996 internal inspection performed after the accident indicated that active corrosion was continuing on the pipeline. The Safety Board therefore concluded that although Koch's records contained information that

¹ For additional information, read Pipeline Accident Summary Report—*Pipeline Rupture, Liquid Butane Release, and Fire, Lively, Texas, August 24, 1996* (NTSB/PAR-98/02/SUM).

cathodic protection levels were inadequate and that active corrosion was occurring on its pipeline system before the accident, the conditions went uncorrected.

Koch informed the Safety Board that as of September 1998, the company was expanding the distribution of its field reports and notifying corrosion technicians when specific conditions are detected so that a field inspection can be made. The Safety Board believes, however, that Koch needs to take more comprehensive action to evaluate data so that it can promptly provide adequate corrosion protection to its pipeline.

Therefore, the National Transportation Safety Board recommends that Koch Pipeline Company, LP:

Establish a procedure to promptly evaluate all data related to pipeline corrosion, such as annual cathodic protection surveys, field reports, internal inspection results, and coating condition data, to determine whether the pipeline's corrosion protection is adequate, and take necessary corrective action. (P-98-39)

Also, the Safety Board issued Safety Recommendations P-98-35 through -38 to the Research and Special Programs Administration and P-98-40 to NACE International.

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 recommendation in this letter. Please refer to Safety Recommendation P-98-39 in your reply.

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in this recommendation.

By: Jim Hall
Chairman