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3. If carrier pipe with heavier walls had been installed at this road crossing instead of casing pipe, this failure might not have occurred.

PROBABLE CAUSE

The National Transportation Safety Board determines that the probable cause of the accident was the failure of a substandard girth weld due to repeated soil stresses.

Contributing to the imposed stresses were the position of the pipe inside the casing and the heavy clay soil surrounding the pipe at each end of the casing.

RECOMMENDATIONS

The National Transportation Safety Board recommends that the Office of Pipeline Safety of the Department of Transportation:

1. Conduct an industrywide survey on the value of casing pipelines beneath roads and railroads. This survey should be undertaken in cooperation with the American Association of State Highway and Transportation Officials, The Federal Highway Administration, appropriate industry associations and engineering societies; and 49 CFR 192.323, Casing, should be amended, if necessary. (Recommendation P-75-1)
2. Require the Michigan-Wisconsin Pipe Line Company to:
 - (a) Recalibrate the pressure-drop settings on their existing automatic valves to better insure their actuation on pressure drops caused by line failure, as required under 49 CFR 192.745, Valve Maintenance: Transmission lines. (Recommendation P-75-2)
 - (b) Conduct tests along its pipeline system (including casing locations) in areas of severe soil swell potential and take appropriate corrective measures to prevent similar failures from occurring, as required under 49 CFR 192.705 Transportation lines: Patrolling. (Recommendation P-75-3)

PAR-75-1

The Safety Board further recommends that the ASME Gas Piping Standards Committee:

3. Develop guidelines for the use, setting, and maintenance of automatic valves on gas transmission pipeline systems. (Recommendation P-75-4)

BY THE NATIONAL TRANSPORTATION SAFETY BOARD

/s/ JOHN H. REED
Chairman

/s/ FRANCIS H. McADAMS
Member

/s/ LOUIS M. THAYER
Member

/s/ ISABEL A. BURGESS
Member

/s/ WILLIAM R. HALEY
Member

April 2, 1975