

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Materials Laboratory Division
Washington, D.C. 20594



December 8, 2021

MATERIALS LABORATORY FACTUAL REPORT

Report No. 21-097

A. ACCIDENT INFORMATION

Place : Farmersville, TX
Date : June 28, 2021
Vehicle : Natural gas pipeline
NTSB No. : PLD21FR002
Investigator : Sara Lyons

B. COMPONENTS EXAMINED

Transducer recovered from gauge pig assembly (Figure 1)

C. DETAILS OF THE EXAMINATION

The transducer was an inline locating transmitter used to track the location of the gauge pig while in the natural gas pipeline. The transducer was manufactured by Contel Systems. The model and serial numbers were TX 2C and 421602 respectively. The transducer was located within the body of the gauge pig at the time of the accident.

The transducer body was cylindrically shaped and constructed from stainless steel with a screw-on end cap (Figure 2). The threaded portion of the transducer body was approximately 1.5 inch long with an O-ring seal. The stainless steel transducer was contained within a black plastic cylindrical container with a screw-on end cap. The transducer was powered by two 1.5 Volt PROCELL brand C-cell alkaline batteries with an expiration date of March 2027 (Figures 3, 4, 5). The alkaline batteries were corroded and exhibited deposits on the exterior consistent with electrolyte salts. The batteries did not exhibit any signs of thermal distress.

Joseph Panagiotou
Fire Protection Engineer



Figure 1: Transducer components as received.



Figure 2: Transducer body.



Figure 3: Transducer batteries.



Figure 4: Transducer batteries negative pole.



Figure 5: Transducer batteries positive pole.