



North American Society for Trenchless Technology
2007 No-Dig Conference & Exhibition



San Diego, California
April 15-20, 2007

Paper E-2-01

FORCEMAIN LEAK DETECTION USING THE SAHARA® ACOUSTIC SYSTEM

Kevin Laven¹, Cliff Jones², Mark Knight³ and Caroline Amyot⁴

¹ Pressure Pipe Inspection Company, Mississauga, ON, Canada

² Pressure Pipe Inspection Company, Mississauga, ON, Canada

³ Dept. of Civil Engineering, University of Waterloo, Waterloo, ON, Canada

⁴ Centre for Advancement of Trenchless Technology, University of Waterloo, Waterloo, ON, Canada

ABSTRACT: Utilities are often forced to install wastewater forcemains to pump sewage under pressure upgrade. Many of these mains are non-redundant lines under waterways or through environmentally sensitive areas. Leakage from these lines can result in significant environmental pollution.

The Water Research Council (WRC), in the United Kingdom, has shown that the Sahara® Transmission Main Leak Location System can be adapted to detect leaks in wastewater forcemains. Sahara® wastewater is the first leak location system that will allow utilities to determine if these often forgotten and critical buried assets are leaking pollution into the environment.

This paper discusses the need for forcemain inspection, the Sahara® wastewater acoustic system, and the need for benchmarking of new technologies by third party organizations. Several North America case studies are also presented that describe the survey performance, challenges and results.