

## ***TRIP WIRE*<sup>®</sup> Is Included in API Standard 1160**

The American Petroleum Institute (API) recently published API Standard 1160, Managing System Integrity for Hazardous Liquid Pipelines. This standard provides pipeline operators with guidelines for developing pipeline integrity management programs in compliance with 49 CFR 195.450, which went into effect on May 29, 2001. These new regulations require pipeline operators to develop effective pipeline integrity management plans. The purpose of these plans is to enhance and validate pipeline integrity, and provide improved protection for high consequence areas that could be affected by an unintended release of hazardous liquids from a pipeline.

Chapter 10 of the new API standard 1160 includes a number of mitigation options that pipeline operators may implement to prevent, detect, and minimize the consequences of unintended releases. EDM Services, Inc. proprietary *TRIP WIRE*<sup>®</sup> system is included in §10.1.3 (Optical or Ground Intrusion Electronic Detection) of the new Standard. This section of the new Standard states,

“These systems include a fiber optic or metallic cable, usually installed twelve to twenty-four inches above the pipeline that are continuously monitored by optical or metallic instruments. Should the cable become damaged or severed, the monitoring devices(s), which are integrated into the pipeline programmable logic controllers (PLC’s) and supervisory control and data acquisition (SCADA) system, issue an alarm and identify the location of the cable damage.

Optical or electronic ground intrusion detection systems may reduce the consequences of third-party intrusion in three ways:

1. *Damage Prevention* – The system may reduce the frequency of third-party incidents by alerting the operator of the location of potential third-party intrusions before the pipeline is damaged.
2. *Prevention of Unintended Releases* – A system alarm may reduce the likelihood of a leak in the event the pipeline is damaged, but not ruptured by third parties. This allows the operator to respond and perform an immediate inspection and/or repair, at the location the damage occurred.
3. *Spill minimization* – In the event third-party intrusion results in an immediate rupture, the intrusion alarm, coupled with a release alarm, will allow response to occur more quickly, and potentially reducing the volume released significantly.”

API Standard 1160 is available from the American Petroleum Institute (800-854-7179). The standard supports the development of integrity management programs required under Title 49 CFR 195.452 of the federal pipeline safety regulations. It is intended for use by individuals and teams charged with planning, implementing, and improving a pipeline integrity management program