

## PIPELINE INTEGRITY WITHIN A QUALITY SAFETY & LOSS MANAGEMENT SYSTEM (SLMS) – Simply, Good Business

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Root-cause investigations of pipeline accidents consistently point towards a need for all pipeline business sectors to better characterize the implications of over-life operations on the deterioration of pipeline structures, and to better align integrity management activities (and cost) more appropriate to actual integrity threats; for internal corrosion deterioration mechanisms.

There is a consistent acknowledgement from regulatory overseers that time-based / prescriptive measures characteristic of regulations, and directives are not adequate to cause reliable pipeline infrastructures, and that more must be done by both the Operator and Regulator to ensure public safety. To achieve the necessary shift, regulatory bodies are encouraging / mandating adoption of Safety and Loss Management Systems (**SLMS**) as an assurance that risk management, and maintenance performed onto pipeline infrastructures will improve pipeline performance.

All involved must understand and support the idea that increased awareness of proactive management systems is a path to improved safety and reliability. Adoption of SLMS models strengthen requirements on the selection and use of direct assessment methods to improve characterization of integrity threats, and that modern methods will rely upon innovative characterization models.

The benefits of a systematic, quality model is that owners are positioned to pin-point critical pipelines otherwise being over-looked by present assessment standards. The SLMS approach places focus on depicting the extent of pre-existing corrosion damage caused by historical operations, and expands consideration of how rogue / fugitive fluids are contributing to most of the significant pipeline failure events across all business sectors.

Alignment of proper maintenance for all critical pipelines necessary to render pre-existing corrosion damage inactive, and to likewise prevent new corrosion for starting requires the SLMS model to support assessment, and communication of implication of operational changes to be efficiently communicated, and enacted throughout the organization. Suitable work management scheduling and tracking tools, and appropriately focused inspection and monitoring functions will be effective at demonstrating efficacy of maintenance, and to offer suitable agility to adjust activities appropriate to changing hazard conditions

SLMS models offer extended, reliable safe operations at cost savings of 40% by overlaying quality process control where such behaviors have been lacking; improved industry performance, and good business.