Pipeline Integrity Software Solution

Pipeline integrity field data acquisition represents a significant investment to pipeline operators, and managing the data generated through a pipeline integrity program is an equally significant challenge. Most of the available data management tools have limitations in alignment, integration, and analysis of multiple data streams.

Current PHMSA guidelines require integration of past, current, and future pipeline integrity data:

“The rule requires that operators integrate assessment results with other pertinent information about the risk conditions of the pipeline to uncover integrity issues that might not be evident from the assessment data alone.”
PHMSA Protocol #3.04

“Verify that individual data elements are brought together and analyzed in their context such the integrated data can provide improved confidence with respect to determining the relevance of specific threats and can support an improved analysis of overall risk.”
PHMSA Gas Integrity Management Inspection Manual, C.02.f.

**N-LINE** is designed to reduce data management problems and streamline the data integration process while ensuring the integrity of the information.

**N-LINE** was developed as a pipeline integrity data management application, allowing field technicians and engineers to gather and process data, and perform quality control checks while integrating and aligning both current and historical data into a single database. This software provides for the analysis of multiple data sets in a single component, increasing both accuracy and capacity.

The application handles the import, storage, and analysis of the following types of data: CIS: ON/OFF and Static, DCVG, ACVG, Soil Resistivity, PCM, ILI, Pipeline Depth, Cell to Cell, IR Drop Survey, Test Station, and GPS. Results are reported through digital, tabular, graphical, and Pipeline Analysis Graph Engine (PAGE) reports formatted to client needs.
Import Features

- Accepts CIS data
- Accepts GPS data (DCVG, ACVG, PCM, Soil Resistivity, HCA, CP Surveys, Mapping, etc)
- Accepts ILI data
- Accepts any other data that can be put into the proper Excel/CSV format
- Data can be imported with and without GPS

Processing Features

- CIS can be ID’ed and matched to GPS data giving CIS GPS coordinates
- Automatic alignment of GPS
- GIS viewer to verify data alignment
- Correction allowed in GIS viewer to correct data
- Calculation of stationing based on GPS coordinates
- History tracking of changes to data that verify data integrity in a printed report
- Imports of multiple GPS data steams matched by GPS coordinate

Analysis Features

- Customization of equations to adjust calculations for client request
- Customization of queries for outputs for customizing reports
- Alignment of data from multiple pipelines in a single corridor
- Standard CP data analysis, i.e., -0.850 volt ON or OFF, >100 mV cathodic polarization shift criteria, <-1.250 volt off or other user defined criterion
- Categorization of results by severe, moderate and minor based on user defined criterion.
- Data integration of indirect inspection results
- Site selection ranking for direct examination
- Data analysis correlated to GPS coordinates for relocating anomalies
- Data integration and analysis of indirect inspection results with ILI data

Reporting/Presentation Features

- All Reports can be printed in alignment sheet stationing or walked stationing
- Standard and customizable tabular reports
- Customizable digital output (Excel/CSV, ESRI Shape Files, Google Earth)
- Hard copy and screen visuals
- PAGE (Pipeline Analysis Graph Engine) Report (integrated graph of all data analysis) (customizable)
- Field graph report (integrated graph of raw data for a single line)
- Standard or customized tabular report (GPS, CIS, Criterion, etc.)

*Call us today to find out how you can use N-LINE to simplify your data management needs.*