

30-inch Integrity Assessment

SIMOPS planning, field expertise, and engineering support

A major midstream gas transmission company required Stress Corrosion Cracking (SCC) integrity assessment services to remain compliant with regulatory specifications. The pipeline was installed in the 1970s and was located in an environmentally sensitive area with high stakeholder interest and visibility. Further increasing project sensitivity, the pipeline owner expected multiple ruptures during the hydrostatic pressure tests phase. In order to compensate for this risk, an extensive outage period was scheduled and communicated to all customers.

PLAN OF EXECUTION

1. **Project Pre-Planning**
 - a. Multiple site surveys.
 - b. Stakeholder planning meetings.
 - c. Creation of technical procedures.
2. **Pipeline Flooding**
 - a. Design of uptake system to meet Department of Environmental Quality (DEQ) water removal permit.
 - b. Filtration of test medium prior to filling the pipeline.
 - c. Utilization of appropriate back pressure to ensure column integrity.
3. **Hydrostatic Pressure Test**
 - a. 24 hour stabilization period.
- b. Pre-planned, controlled pressurization and depressurization process.
- c. Multiple data points to monitor pressure along each test section.
4. **Pipeline Dewatering**
 - a. Release of test medium into natural water body.
 - b. Utilization of carbon and particulate filtration to meet DEQ discharge permit.
 - c. Controlled release to maintain back pressure to prevent air lock.
5. **Pipeline Drying**
 - a. Achieved dew point of -40°F and ¼ inch penetration.

TECHNICAL ACHIEVEMENTS & BENEFITS

- Multiple integrity tests with no ruptures.
- Project completed significantly ahead of schedule, which compounded cost savings for the operator.
- Project completed with zero incidents and zero negative environmental impact.
- OSHA work site audit included favorable review.

LOCATION

Alabama (US)

SPECIFICATIONS

Nominal Size: 30 inches
Wall Thickness: 0.375 inches
Maximum Allowable Operating Pressure (MAOP): 1,440 psi

SCOPE OF WORK

Regulatory re-assessment resulted in multiple pipeline integrity needs.

CHALLENGE

- **Aging infrastructure**
- **Limited accessibility**
- **425 feet elevation change**
- **High potential for air lock**
- **High economic impact for an extended outage**