Integrity Management Near Misses – Findings & Remediation

Kyle Frayn – 2/5/2026 PSCW Safety Conference

Agenda

- WEC – An Energy Delivery Company
- Covered Segments – High Consequence Area
- Transmission Integrity Assessment Methods
- ECDA 50% Wall Loss
- ECDA Manufacturing defect
- ECDA Casing Limitations
- ILI Assessment in Jackson County
- ILI 3rd Party Damage
- ILI 3rd Party Damage on Retrofitted Pipeline

WEC – An Energy Delivery Company

Serving the region's energy needs

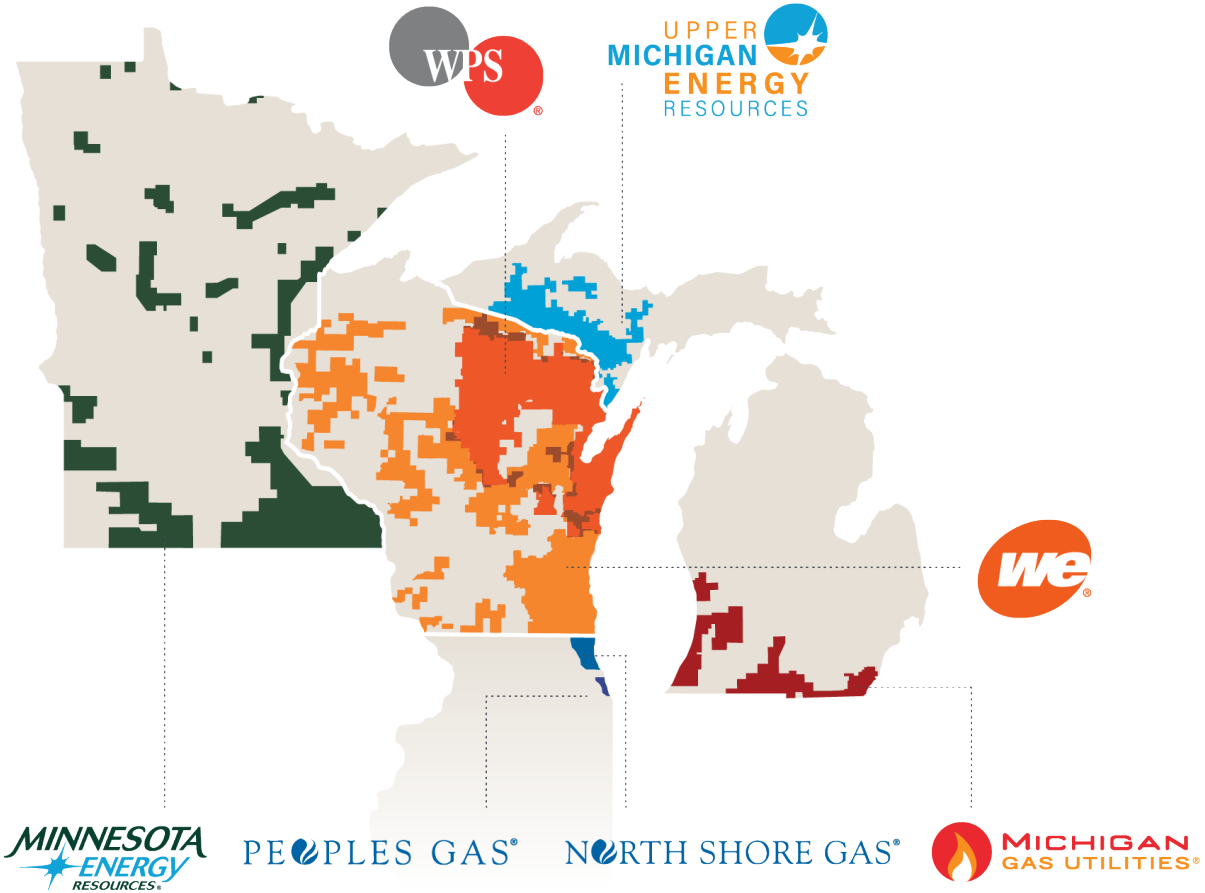
4.7 million
customers

72,400 miles
of electric distribution

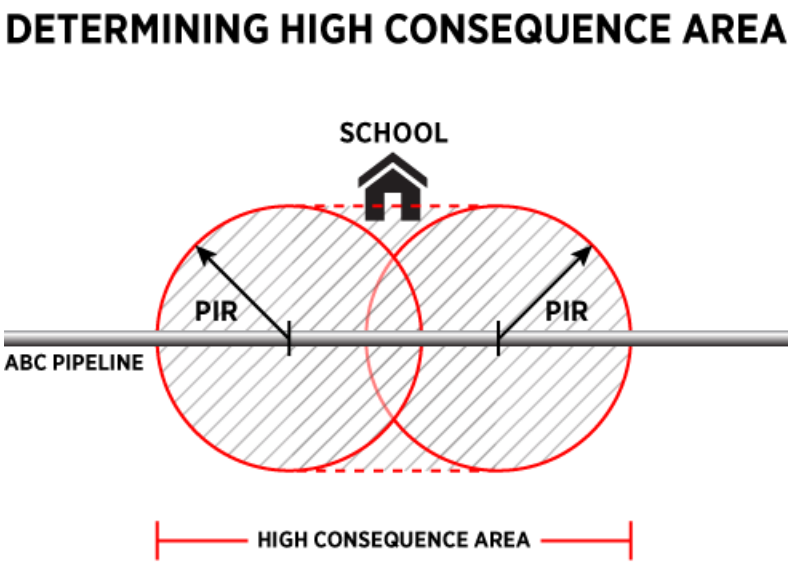
47,000 miles
of natural gas distribution and transmission lines

8,150 megawatts
of power generating capacity

7,000 employees



Covered Segments – High Consequence Area (HCA)



What triggers an HCA?

- A populated area in the vicinity of a transmission pipeline
- Identified Sites
  - Difficult to evacuate
  - Outside Identified Site
  - Identified Building

Transmission Integrity Assessment Methods

Common integrity assessment methods at WEC are:

- External Corrosion Direct Assessment **(ECDA)**
  - Direct Current Voltage Gradient (DCVG)
  - Close Interval Survey (CIS)
- In-Line Inspection **(ILI)**

Transmission Integrity Assessment Methods

ECDA assessments methods CIS and DCVG :

- Performed by walking over the pipeline
- Can find areas of pipe with coating damage
- Can find areas of pipe with low cathodic protection
- Cannot assess cased pipe

Transmission Integrity Assessment Methods

ILI assessments:

- Performed by equipment that moves through the inside of the pipe (a “smart pig”)
- Can measure wall loss
- Can measure dents
- Cannot assess pipe coating

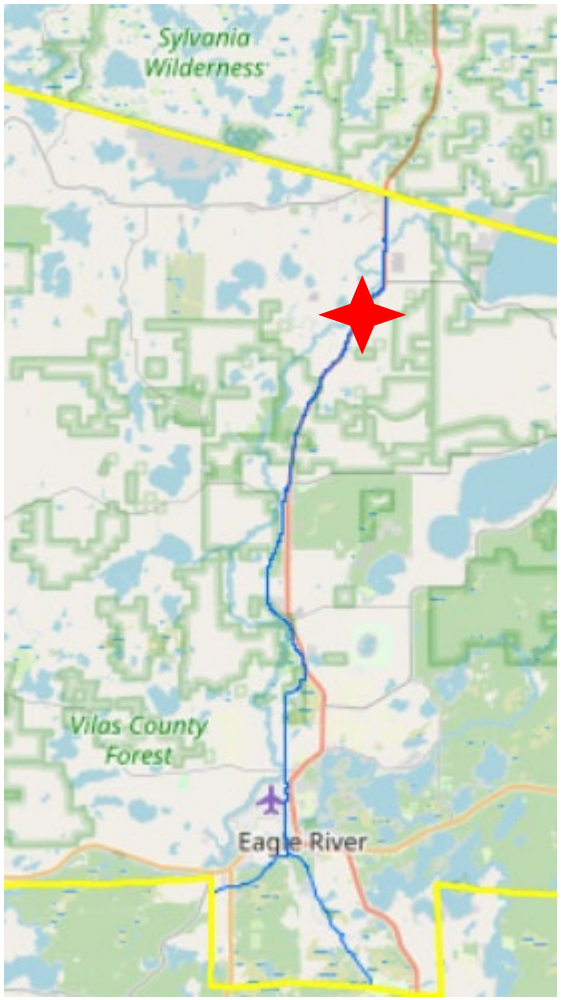
Transmission Integrity Assessment Methods

The results of integrity assessments are used to determine locations where the pipe is exposed and directly examined.

If pipe or coating defects are found, repair occurs.

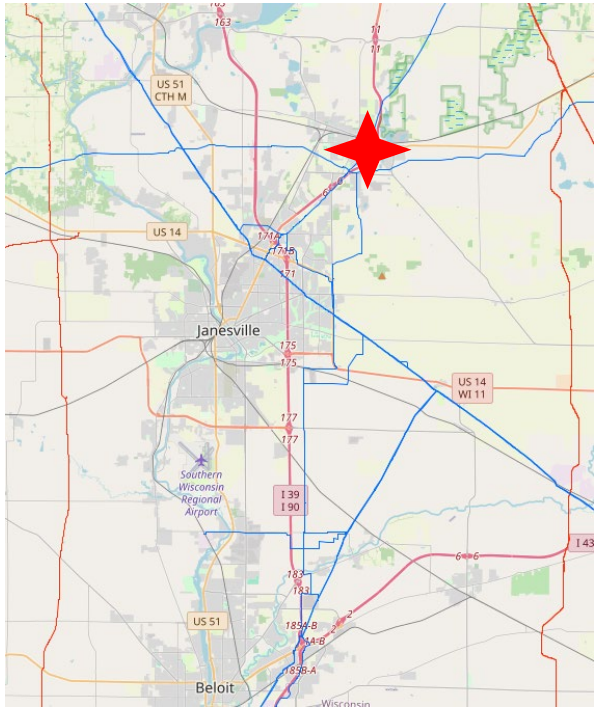
ECDA 50% Wall Loss

- 8in pipe, 960 psig MAOP, built in 1998
- In 2010 a 50% wall loss feature was found at a DCVG indication
- Pipeline assessment method changed to ILI
- ILI runs in the last 15 years have allowed WEC to identify, address, and monitor corrosion.



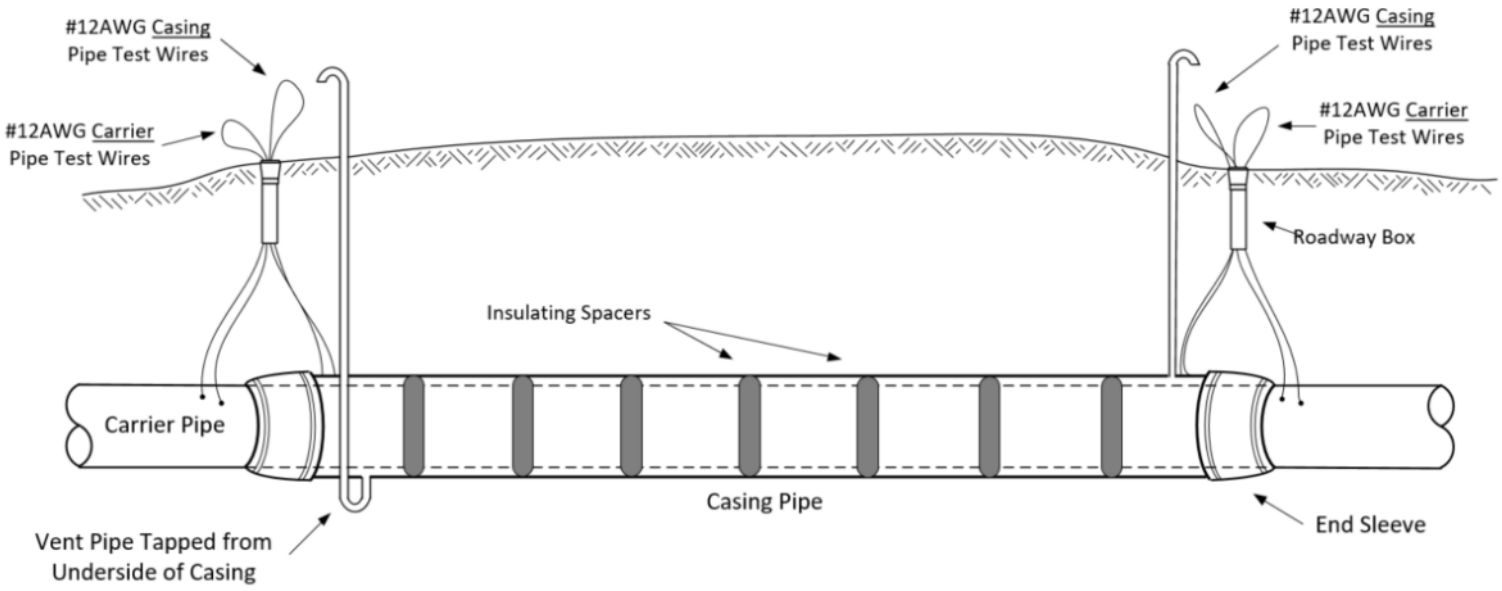
ECDA Manufacturing defect

- 8in pipe, 500 psig MAOP, built in 1952
- Manufacturing defects found at ECDA indication



ECDA Casing Limitations

- 8in pipe, 500 psig MAOP, built in 1952
- Development created a new HCA that included a cased railroad crossing
- Cased segment was identified and will be replaced to allow CIS/DCVG assessment

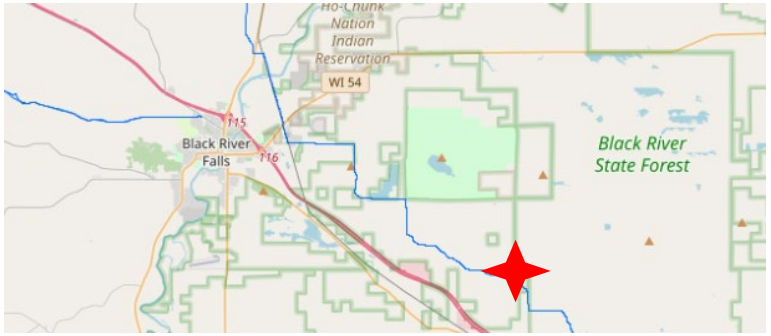


ILI Assessment in Jackson County

- ILI smart pigs require a controlled gas flow rate to collect accurate data
- Unseasonably warm weather did not create enough gas flow
- Flaring equipment was used to increase gas flow

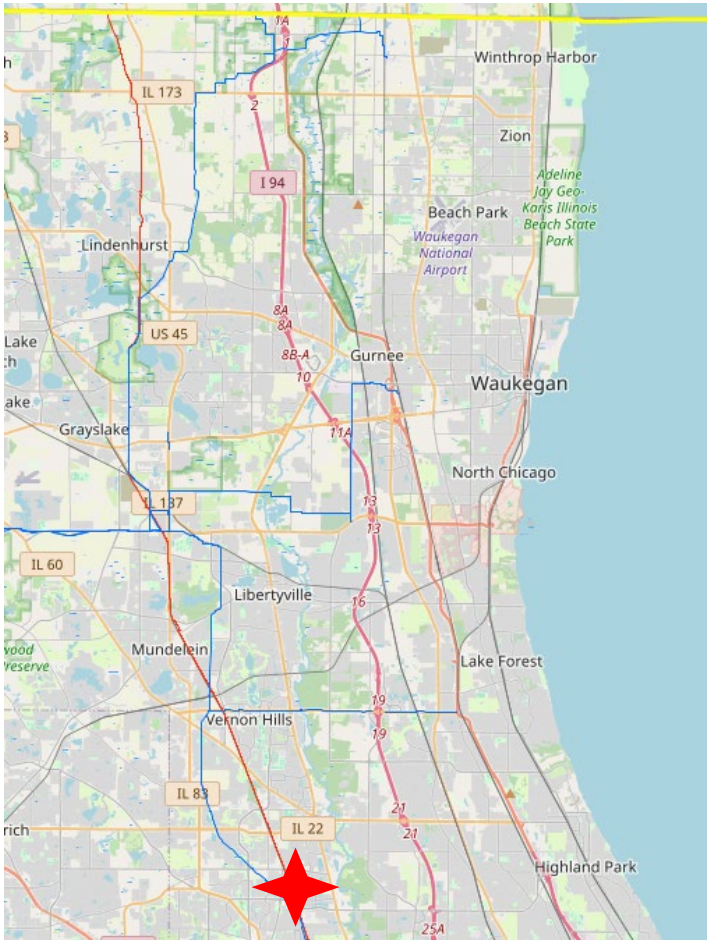
ILI 3rd Party Damage

- 12in pipe, 475 psig MAOP, built in 2015
- Post construction ILI found no dents over 2%
- 2025 ILI indicated a 5% dent with metal loss in a non-HCA area
- Company responded to the indication as an immediate condition and confirmed apparent 3rd party damage



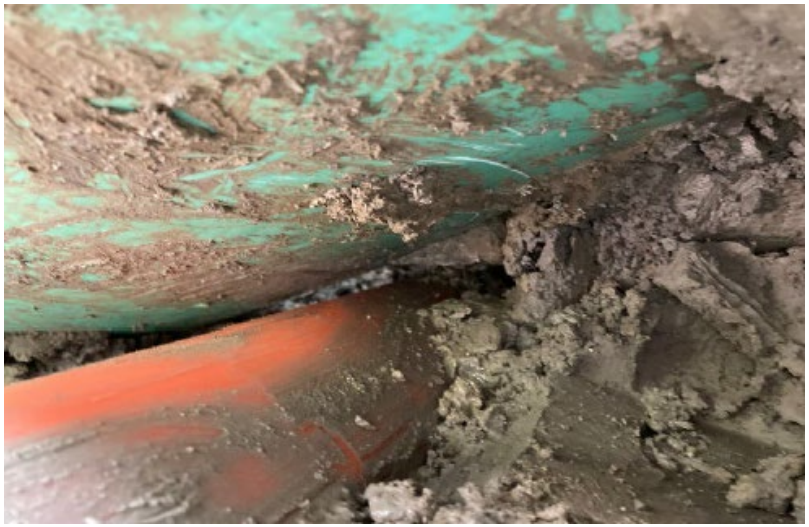
ILI 3rd Party Damage on Retrofitted Pipeline

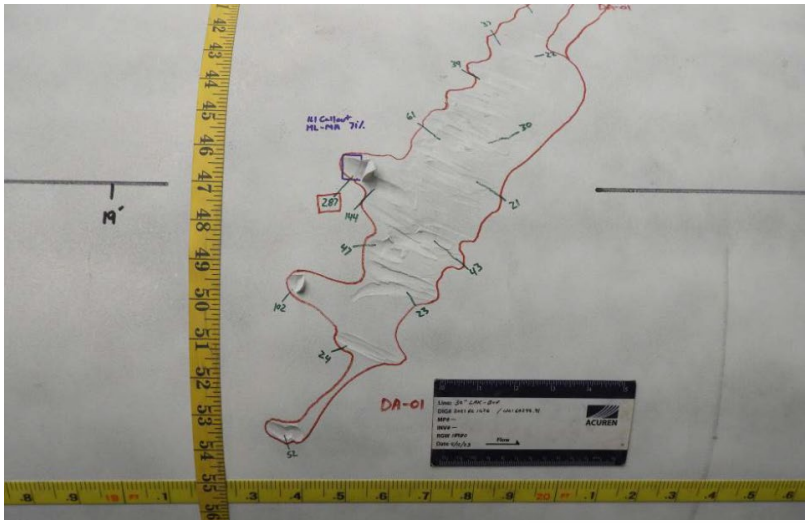
- 30in pipe, 218 psig MAOP, built between 1987 and 1991
- 13 miles of pipe was retrofitted to be ILI able in 2020
- Pipeline was pigged in 2021
- 71% wall loss feature was found by the ILI tool



ILI 3rd Party Damage on Retrofitted Pipeline

- The direct examination found a telecommunications cable in direct contact with the pipeline
- The cable had been directionally bored into the 30in gas line in late 1990s
- The damaged pipe was cut out and replaced





Conclusions

- Understanding your pipeline system and available assessment methods drives effective integrity management
- Integrity management is a continually improving process for pipeline operators

Questions?