Pipeline Safety Indicators

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Need to consider leading and lagging indicators.

Leading indicators are a precursor to an incident, ie. something that points to a potential issue before it becomes an incident. Some examples are:

- Overdue mechanical integrity inspection
- Hazard reports
- Safety related condition reports
- Number of corrective items discovered during audits by external agencies
- Number of cases of digging without prior notification
- Number of cases of damage with Inspector not present
- Number of cases of damage with Inspector present
- Number of Preventative Maintenance work orders for the pipeline that are not completed within the required regular time frame
- Number of leak detection system alarms that are not leaks (false alarms make it harder to detect real leaks)
- Number of cases of exterior corrosion on the pipeline discovered during excavation activities
- Cathodic protection system issues
- Corrective Maintenance work orders identified and completed in a reasonable time frame

Lagging indicators mean that an incident has already occurred:

- Third party damage resulting in a leak or spill
- First party damage resulting in a leak or spill
- Incident reports (covers injuries, fatalities, loss of containment, breach of security etc.)

What indicators does the WUTC (Joe Subsites) look at when risk ranking pipeline operators for inspections?