



AMERICAN PETROLEUM INSTITUTE



Association of Oil Pipe Lines

Coastal Eco USAs Questions for Consideration

Erol Alavi – Plains All American

Agenda

- Type of HCAs
- Type of Analysis
- Scheduling & Pressure Reduction
- Prioritization HCA vs Non-HCA
- Misconception of Non-HCA
- Conservatism in Calculations
- Recommendation

Type of HCA

- HPA – Highly Populated Area
- OPA – Other Populated Area
- CNW – Commercially Navigable Waterway
- DW USA– Drinking Water Unusually Sensitive Area
- Eco USA – Ecological Unusually Sensitive Area
- Operator Identified Areas

Type of Analysis

➤ Analysis Model

- Liquid Volume Release – From a pipeline rupture
- Spray Analysis – From a pipeline puncture

➤ Analysis Type

- Direct
- Indirect
- Direct Watershed
- Indirect Watershed
- Terrain Flow

Scheduling & Pressure Reduction

- Type of Conditions
 - Immediate
 - 60 Day
 - 180 Day
 - Others
- Impact anomaly repair schedule
 - Can lead to an ineffective use of resources. Requires that operators conduct unnecessary repairs instead of using Engineering Critical Analysis (ECA), such as Finite Element Analysis.
 - Filing an exception to use ECA is not practical due to time constraints.
 - For example: stabilized 50% corrosion, non-injurious dents under 3%, non-injurious metal loss in dents, corrosion along (but not impacting the) long seam etc.
- Unnecessary Pressure Reduction
 - Metal loss with Dent vs ILI accuracy (Tool tolerance, 0.5% Dents)

Prioritization HCA vs Non-HCA

- Prioritization based on HCA vs Non-HCA
- It will be hard to prioritize (Which anomaly first)
- HPAs or OPAs will be considered same as proposed additional HCAs
- Original HCAs are justified by scientific data

Misconception of Non-HCA

- Misconception that Operators do not repair anomalies in Non-HCA areas
- Operators treat anomalies in a similarly in Non-HCA areas
- The major difference is prioritization and repair scheduling

Conservatism in Calculations

- Burst pressure calculations are widely known to be conservative (B31G, Mod B31G, RSTRENG, LnSec)
- Tool tolerances are added to calculations for an additional measure of conservatism
- Conservatism with HCA analysis
 - Worst case scenario rupture volume
 - Maximum flow rate
 - Maximum response time
 - Assumed during a rainy day, etc.

Recommendation

- These additional ESAs can be considered as another priority tier.
 - Medium Consequences Areas (MCA)
 - Utilize same repair criteria
 - Providing additional time to prepare and to make repairs
- More time and discussions are needed with Operators; many Operators are not aware of the proposed changes
- More attention should be given industry research
 - PHMSA involvement with the development of industry standards such as API RP 1183 (Dent Assessment) has been constructive