



Public Workshop on Integrity Verification Process (IVP)

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Presenting on behalf of INGAA

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Goal: Zero Incidents

- Significant effort has gone into IMCI since it started in 2010
- Used industry experts (SMEs, operators, and other stakeholders) to develop the program
- Stakeholders included:
 - Other industry groups
 - PHMSA
 - NTSB
 - NAPSR
 - Public (PST)
- INGAA provided the industry with a set of processes that addresses the stakeholders concerns. The processes are meant to ensure pipeline safety and support goal of zero incidents

Results

- Voluntary commitment to expanding integrity management (IM)
 - Apply IM principles across entire system
 - Phased approach based on population
 - Coverage to include 100% population by 2030
 - Many operators are moving forward with IM beyond HCA.
- Fitness for Service (FFS) Process to address MAOP
 - Uses established risk based approach for hazardous liquid pipelines.
 - Addresses the testing of previously untested pipelines.
 - Applies to pre-regulation pipelines where pressure test records do not exist.
 - Prioritizes timing of actions based on risk.

Positives

- Draft IVP has generated many discussions between PHMSA and stakeholders.
- This workshop is intended to solicit stakeholders input.
- Draft IVP demonstrates continued efforts to develop alternatives for moving to a higher level of pipeline integrity and safety. INGAA shares and supports this ever important goal.
- Draft IVP incorporates certain aspects of INGAA's FFS and IM expansion plan and commitments.

Challenges

- The Draft IVP appears to incorporate too many issues within one process.
 - MAOP issues
 - IM expansion
 - Material validation
- MAOP determination methods:
 - Draft IVP incorporates 4 record verification steps in order to progress to continued operation -“AND” approach.
 - Many determination records were established using the 70’s vintage (192.607). Direction – “OR” approach.
 - The commonly accepted approach for the recent PHMSA Part Q annual report utilizes the “OR” approach.
- The Draft IVP includes multiple “yes/no” decisions that directs most pre-regulation pipelines to additional material testing and documentation regardless of the hydrostatic test history and/or pressure level.

Challenges *continued*

- The Draft IVP appears to expand IM response processes.
- Although the comments are due 32 days from now, and there are several definitions and specific guidelines to be developed.
- The 2011 Pipeline Safety Act requires taking into account consequences to safety and the environment and to minimize costs and service disruptions.

- MAOP
 - The MAOP of pipelines that could impact population should be revalidated if there is concern about the material strength and construction practices.
 - A 1.25 x MAOP pressure test or alternative technology process that emulates the test during a pipeline's life adequately establishes material strength and construction practices of the pipeline.
 - Pipeline material sampling and testing to confirm properties is not necessary where a pressure test has already established material strength and construction practices.
 - Improvement in technologies is anticipated to allow MAOP reconfirmation and "as built" validation. The technology advances should also improve response and remediation processes while minimizing outage impacts.

INGAA's Basic Tenets (*Continued*)



- Integrity Management
 - Material properties are important for the IM program.
 - “Construction Techniques” are addressed in IM.
 - “Pipe Manufacturing” is addressed in IM.
 - Fatigue of material strength for natural gas pipelines are addressed in IM.

- IM Expansion
 - IM should be expanded prioritized by population. INGAA's plan provides a basis to supplant “class” along with a critical phased implementation plan.

Suggestions

- Re-organize the IVP goals and sub-processes to separate and concurrently address
 - MAOP validation
 - IM expansion
 - Adequate IM records
 - Risk priorities
- Agree on common tenets
 - Hydrostatic testing is a proven process for strength and confirming MAOP.
 - Adequate material properties is important for IM.
 - Technology can augment or supplant vintage practices.
 - Solutions need to be operationally, technically and economically feasible.
- Make comment period allowances for the development of balanced solutions that are feasible and practicable.
- INGAA will approach this effort with the intent to find a positive solution.

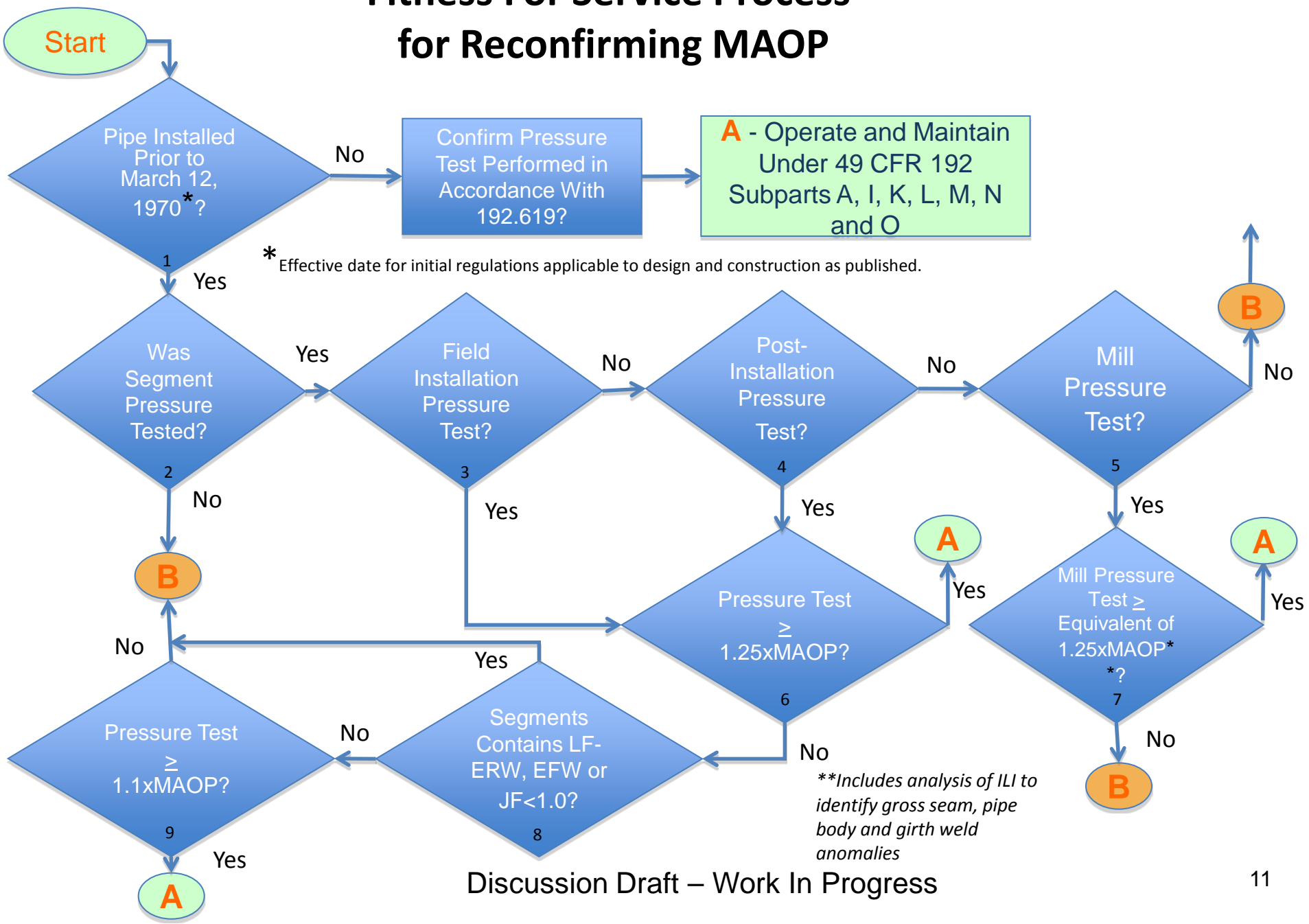
Appendix

Summary of INGAA's Fitness For Service Process (FFS)



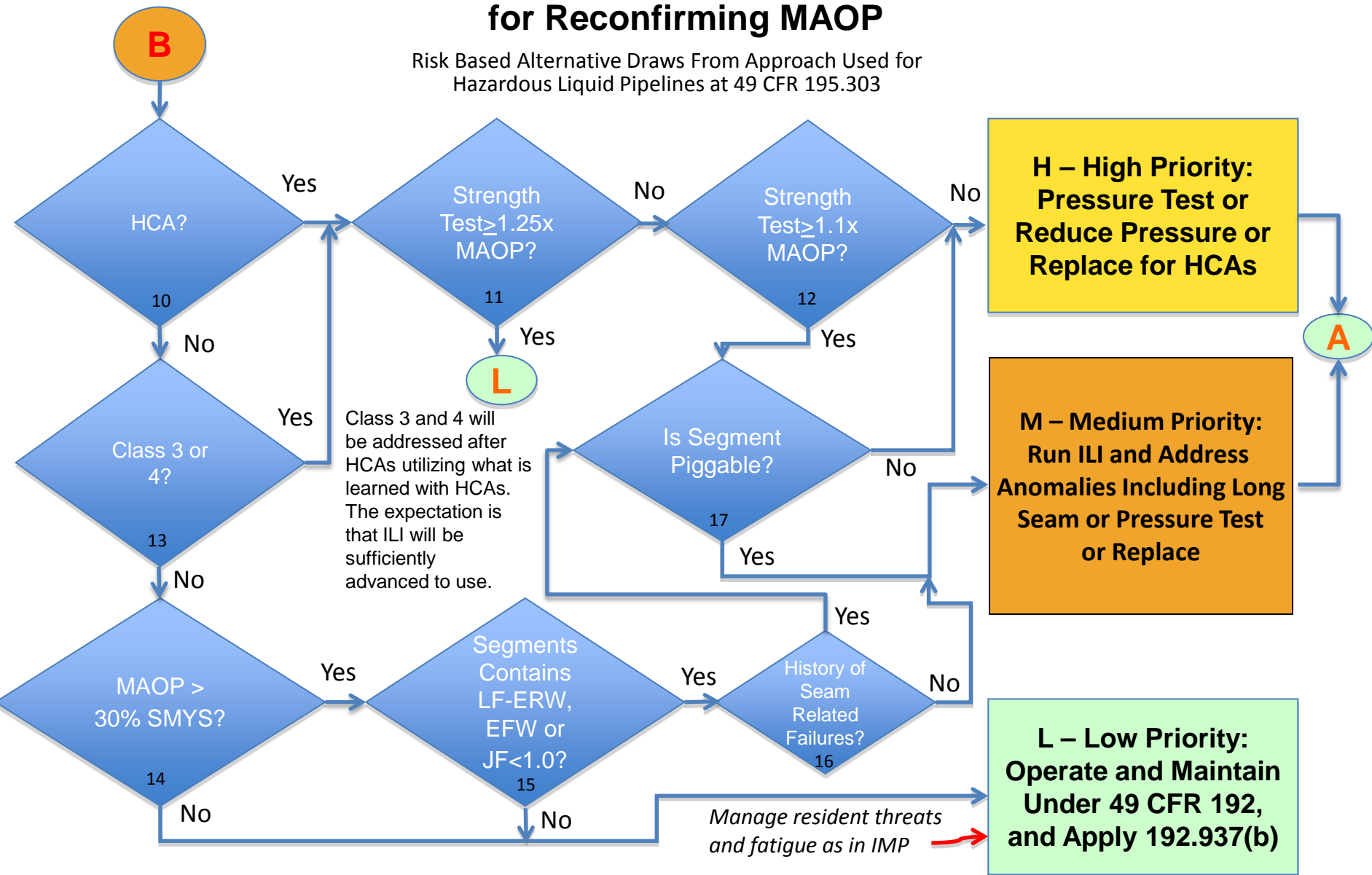
- Utilizes the established risk-based approach for hazardous liquid pipelines
- Addresses both the lack of records to revalidate the MAOP and testing of previously untested pipelines
- Applies to pre-regulation pipe only where pressure test records do not exist
- Can be used to **Establish MAOP As Originally Installed** and is based on three fundamental principles:
 - This is a one-time, separate and distinct effort from the ongoing management of pipeline safety and integrity.
 - When lacking records, a pressure test to 1.25x MAOP is a technically valid means of establishing the MAOP.
 - Well-established FFS methods using ILI are also a scientifically valid means of establishing the “material strength” and the MAOP.
- Prioritizes timing of any actions based on risk
- INGAA understands the FFS satisfies the NTSB intent to ultimately establish an effective safety margin.

Fitness For Service Process for Reconfirming MAOP



Fitness For Service Process for Reconfirming MAOP

Risk Based Alternative Draws From Approach Used for Hazardous Liquid Pipelines at 49 CFR 195.303



LF-ERW is low frequency electric resistance welded; EFW is electric fusion or flash welded; and JF is joint factor as defined at 49 CFR 192.113