

**Hazardous Liquid Pipeline Safety Rulemaking  
Docket No. TO-000712**

**Comments for WUTC Workshop of January 23, 2001**

**Date:** January 9, 2001

**To:** WUTC

**Via email:** records@wutc.wa.gov

Thank you for the opportunity to comment on the above proposed rulemaking workshop. The following reflect our brief observations related to your specific questions and are based on a wealth of liquid pipeline experience gathered from across the country.

Thank you,

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President  
Accufacts Inc.

**RULEMAKING DISCUSSION QUESTIONS**

**ISSUE - Operation and maintenance of safe and efficient hazardous liquid pipeline facilities.**

Question 1. What is needed to require companies to operate pipeline facilities so they are safe and efficient?

Answer 1. Catastrophic releases of significant volume should be prevented. Much creditability loss is generated when these high profile events occur, especially if the event is of a substantial duration that involves the loss of life and/or considerable property damage. The public has a very low tolerance for their neighborhoods being destroyed/polluted and the resulting devastation on their lives and property values.

Question 2. What is needed to require companies to maintain pipeline facilities so they are safe and efficient?

Answer 2. Insure that pipeline companies have appropriate management process in place that provide sufficient cost effective approaches to avoid catastrophic events.

Question 3. How can training and certification requirements be improved?

Answer 3. Clear concise training/certification programs are very important to insure personnel are properly trained to handle a situation that might develop in a release.

certification programs usually rely on a set of well document series of written questions that increase in difficulty with additional responsibility/classification. Certification Testing is also required to be given by at least two separate individuals at different times (i.e. time interval of at least two weeks) to avoid rote memorization problems associated with close testing. A combination of written responses and demonstrated walk through with a least two testers on two separate occasions is also an additional requirement for a proper certification test.

It should be emphasized that Training/Certification programs on their own, do not provide adequate safety nets toward improving/preventing release events. Proper equipment and management process work in concert with Training/Certification to prevent/mitigating such events.

Question 4. What NTSB, OPS and other organization recommendations should be considered in rulemaking related to methods and technologies for testing of pipeline structure, leak detection, and other elements of pipeline operations?

Answer 4. Will hold for discussion at workshop.

#### **ISSUE – Emergency procedures for hazardous liquids pipeline.**

Question 1. What is needed to require companies to rapidly locate and isolate all reportable releases?

Answer 1. On locating releases, unfortunately despite the many claims made by various “start of the art leak detection” vendors, rapid identification of a major release is still very difficult, especially in pipelines operating in very hilly terrain. In the last 1 1/2 years at least four major liquid pipeline ruptures (holes much bigger than the cross sectional area of the pipe) with releases between 260,000 and 560,000 gallons, occurred with “state of the art” transient leak detection systems. These releases occurred for many many minutes before identification. In many of these cases the releases involved restart of pipeline pumps that had tripped on low suction pressure as the release rate pulled away from the pumps. Ironically in the rush to develop technology to detect smaller and smaller leaks, the ability to reliably determine ruptures has been lost in the complication. Fairly simple, very cost effective equipment/software can be added that can provide control center personnel clear indications of major pipeline ruptures, so that they can undertake timely response.

On isolating releases, we have been running across many quotes across the country related to the ineffectiveness of block valves to mitigate leaks related to pumping or draindown. The most often cited report is the California State Fire Marshall Risk Assessment dated March 1993. We must comment that the calculation approach mentioned in this report is technically flawed and fails to model release rates associated with liquid pipeline ruptures, especially in the early stages of a rupture. In these early stages, release rates are at their highest and probability of detection at its lowest. Depending on pipeline terrain, the proper placement/combination of remote operated block valves and check valves can play a significant cost effective role in substantially reducing spill volume during a pipeline rupture. We must caution that in

all fairness, placement of such valves/valve combinations is pipeline specific driven by terrain, population density, and other environmentally sensitive factors. For liquid pipelines, we are not recommending the arbitrary placement of remote valves or check valves so many miles apart as is required for natural gas pipelines.

## **ISSUE – Reporting**

Question 1. How can reporting requirements be improved?

Answer 1. Some federal reporting requirements have a “forgiveness clause” excusing the need to report a reporting event if the situation is timely corrected. Such clauses should be prohibited at the State level as these clauses fail to permit regulatory agencies to ascertain if a management process /equipment breakdown issue is occurring that might lead to more catastrophic situation.

Question 2. How can Operations Manual requirements be improved?

Answer 2. Make the manuals simpler and to the point on issues that are operator related. We have seen way too many operations manuals that are too thick, that contain volumes of information not of value to the operator. It is very hard work to keep such information concise and to the point. For example see answer 3 below.

Question 3. What elements should be required to effectively require and review operations manuals?

Answer 3. Some critical basic elements:

- 1) Simple elevation profiles overlaid with valve locations and identification of HCAs.
- 2) Simple drawings showing the overpressure protection devices,
- 3) Separate drawings showing lines of demarcation between shipper/operator for the pipeline,
- 4) Summarization of pipe classification/MOP/thickness,
- 5) Plot of pipeline MOP and worse case operating pressure profile vs approximate pipeline milepost (gives the operator a clear idea of overpressure safety margin).
- 6) Depth of coverage survey information also gives the operator some degree of understanding regarding possible third party damage potential.
- 7) Clearly labeled emergency response section by emergency (i.e. inadvertent block valve closure) with emergency procedures in checklist format.

Question 4. How should the Commission coordinate information related to pipeline safety to local planning and siting authorities?

Answer 4. No comment at this time.

## **ISSUE – Penalties and enforcement.**

Question 1. Please provide your comments on any changes you believe should be addressed in the rulemaking process.

Foster and encourage the development of smart pigging tools, but recognize the limits of such pigging tools especially as they may be in developmental phase. Note that no one smart pig is capable of identifying “at risk” anomalies that can result in rupture failure.