Summary of Written Comments
Hazardous Liquids Pipeline Safety Rulemaking
For January 9, 2001 Comments
TO-000712

Rev: January 22, 2001

ISSUE	INTERESTED PERSON	COMMENTS	STAFF RESPONSE
Operation & Maintenance of Safe & Efficient Hazardous Liquids Pipeline Facility			
Q.1) What is needed to require companies to operate pipeline facilities so they are safe and efficient?	Richard B. Kuprewicz President, Accufacts, Inc.	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 like 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.	Staff agrees and 49 CFR 195 Amendment 70 will be adopted by the Commission. This rule requires comprehensive analysis of the integrity of pipeline segment that, in the event of a leak could affect populated areas and unusually sensitive areas. Additional rules are being reviewed for large and small companies.

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	Jesse Tanner Mayor, City of Renton	We believe that adequate, certified training is essential, and that refresher training should be mandated. Training should be required whenever a new control system or piece of equipment is brought on line. Also, there needs to be safety systems built into the processes, and redundancy of critical processes. Operators should be frequently drilled on emergency operation and response. Rules must be established to provide for shut down first, questions later. There should also be a requirement that the service provider enter into emergency response agreements with local jurisdictions and the state.	Staff agrees and 49 CFR 195 Amendment 67 will be adopted by the Commission. This rule requires pipeline companies to develop and maintain a written qualification program for individual performing task on pipeline.
Q. 2) What is needed to require companies to maintain pipeline facilities so they are safe and efficient?	Richard Kuprewicz President, Accufacts, Inc.	Insure that pipeline companies have appropriate management process in place that provide sufficient cost effective approaches to avoid catastrophic events.	Staff agrees and 49 CFR 195 Amendment 70 will be adopted by the Commission. This rule requires comprehensive analysis of the integrity of pipeline segment that, in the event of a leak could affect populated areas and unusually sensitive areas. Additional rules are being reviewed for large and small companies.

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	Jesse Tanner Mayor, City of Renton	Tight standards establishing minimum thresholds for materials and equipment. Much more system testing should be mandated: both internal electronic testing and hydrostatic pressure testing on a reasonable schedule. More government oversight is needed to ensure that the businesses follow these stronger standards. The system should be required to undergo a technical audit every five years or so to assure that the systems are operating as designed, there is sufficient safety provisions and redundancy, sufficient operator proficiency, and capital safety improvements are made as needed (such as adding valves, providing additional automation, improved detection systems, etc.) There should also be better leak detection systems in place. Systems should be installed to detect small leaks that can contaminate ground water and create environmental hazards, and are yet too small to be detected by current pressure flow based leak detection systems. Leak detection systems installed in the field should be electronically connected to the control centers, and alarms should be annunciated.	Staff generally agrees, although technological limitations must be considered. Further discussions on this issue will occur during the rule drafting process. Staff is not sure leak detection systems are available in the market today that are sensitive and reliable to identify small leaks. Staff agrees and 49 CFR 195 Amendment 70 will be adopted by the Commission. This rule requires comprehensive analysis of the integrity of pipeline segment that, in the event of a leak could affect populated areas and unusually sensitive areas. Additional rules are being reviewed for large and small companies.

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			Staff is reviewing the minimum leak detection volumes, static leak detection systems, and hydrostatic testing, as part of a required Integrity Management Program.
Q. 3) How can training and certification requirements be improved?	Richard Kuprewicz President, Accufacts, Inc.	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 documented 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 at 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.	Staff agrees that training and certification is an important issue, and there is a need for minimum company standards. Staff agrees and 49 CFR 195 Amendment 67 will be adopted by the Commission. This rule requires pipeline companies to develop and maintain a written qualification program for individual performing task on pipeline. Staff is reviewing the frequency and standards for simulated incidents & drills.

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	Jesse Tanner Mayor, City of Renton	They can be audited on a regular basis by regulatory authorities to assure that rules are being met.	Staff agrees. Staff inspections are needed on periodic, timely, and regular basis to confirm compliance.
Q. 4) What NTSB, OPS and other organization recommendations should be considered in rulemaking related to methods and technologies for testing pipeline structure, leak detection, and other elements of pipeline operations?	Richard Kuprewicz President, Accufacts, Inc.	Would like to discuss at the January 23 workshop.	Staff agrees to discuss at the stakeholder meeting. • Integrity Management for small companies. • Corrosion control rules and updates. • Applying the Federal Integrity rules 49 CFR 195 Amendment 70 to all intrastate operators. • Annual reporting requirements for pipeline mileage, volumes and cause of spill and failures. • Maps and updates.

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Emergency Procedures and Reporting for Hazardous Liquid Pipelines Q. 1) What is need to require companies to rapidly locate and isolate all reportable releases?	Richard Kuprewicz President, Accufacts, Inc.	On locating releases, unfortunately despite the many claims made by various "state 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 ½ 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 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 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 drain-down. The most often	Staff agrees that a full-bore (large) rupture of liquid pipeline can be reliably detected. The question is how quickly can a nearby block valve be closed to minimize the damage to the environment & HCA's. The use of check valves on other devices at sensitive and populated areas are required for large companies where the integrity management plan identifies a need at HCA's. Staff is considering adopting The Integrity Management Standard 195 Amendment 70 for all liquids companies.

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		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.	
	Jesse Tanner Mayor, City of Renton	More leak detection equipment is required using technologies that can detect the small leaks as well as the large ones. This leak detection technology should include improved instrumentation, telemetry and SCADA system in order to instantaneously transmit information about the leak to the control center. In addition, stronger rules are needed for notification of agencies and local and state government about leaks and other emergency situations.	Staff agrees, although technological implications must be clearly understood as rules are written.

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Reporting			
Q. 1)How can reporting requirements be improved?	Richard Kuprewicz President, Accufacts, Inc.	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.	Staff sees the benefits to a forgiveness clause for initial telephonic reports.
Q. 2) How can Operations Manual requirements be improved?	Richard Kuprewicz President, Accufacts, Inc.	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.	Staff agrees that manuals need to include accurate and precise procedures as well as check lists for responding to abnormal events.
Q. 3) What elements should be required to effectively require and review operations manuals?	Richard Kuprewicz President, Accufacts, Inc.	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.	Staff recognizes that these elements need to be covered by an integrity management plan and some should be included in rule.

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		4) Summarization of pipe MOP/ Classification/ 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.	
Q. 4) How should the Commission coordinate information related to pipeline safety to local planning and siting authorities?	Richard Kuprewicz President, Accufacts, Inc.	No comment at this time.	

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Penalties and Enforcement			
Q. 1) Provide comments on any changes you believe should be addressed in the rulemaking process.	Richard Kuprewicz President, Accufacts, Inc.	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.	A smart pig provides indications of wall loss and some dents on pipeline. A qualified Engineer must evaluate the data collected by the pig and identify "at risk" anomalies which can result in failure. A combination of tools can offer the most comprehensive information on the condition of the pipe. Staff recommends the use of Smart Pig at a specified interval.
	Jesse Tanner Mayor, City of Renton	One point that should be made is penalties for violations should be large enough and sure enough to get the attention of the regulated industries, and to provide motivation to conform to the regulations and to operate the systems safely.	Staff agrees that penalties should be part of the Commission's enforcement programs and serve as incentive for compliance.

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1) General Comments	Connie Hoag Whatcom County Council Member	Annually walk each line and probe for depth to ensure the lines are maintained at a safe level and to watch for signs of leaks.	Staff believes that patrols should be a frequent as necessary.
		Annually smart pig each line to assess the condition of the line.	Staff agrees that pigging is a good assessment tool. Annually may be ok for some HCA's , but others may need to be done as necessary to meet the integrity management program.
		Install remote valves at intervals of no more than 5 miles, with additional valves in highly populated, environmentally sensitive, or geologically unstable areas.	Staff believes that remote valves should not be installed at fixed intervals, but consistent with integrity management plans.
		Require equipment and methodology to prevent pressure surges such as occurred in the Whatcom Creek incident.	Pressure surges in a liquid pipeline is controllable through proper design.
		Require compliance with current pipeline standards whenever repair or replacement is necessary.	Commission regulations require pipeline companies to meet current standards for repair and replaced pipeline sections.

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			For pipeline showing wall loss, of 50% or more, staff is reviewing the need to require replacement or repair.
		Determine if there is a correlation between the thickness of pipes and the occurrence of pipelines failures. Require upgrades as appropriate.	Staff agrees.
		Require a plan for phased-in installation of breaker walls on existing pipelines on slopes.	**Staff question**: Staff needs clarification of the term breaker walls. Staff has concern about cathodic protection, corrosion control and third party damage.
		Require extra precautions on slopes, such as constant ground movement monitoring equipment and double-walled pipes.	Staff agree that landslide and ground movement need to be identified and mitigated.
		Require pipeline companies to prepare and distribute neighborhood evacuation plans as part of their emergency response strategy.	Pipeline companies must have emergency response plan for their pipeline systems. Included in the plans are requirement to coordinate with police and

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			Fire department on pre-planned and actual emergencies. Neighborhood evacuation plans are included in the code.
		Expand the Community Right to Know to include natural gas and fuel pipelines.	This is an issue/concern that the Citizens on Pipeline Safety Committee is currently working on. The Committee will be participating in the Rulemaking process.