

Agenda Date: July 26, 2002  
Item Number: C1

**Docket No.:** **TO-000712**  
Rulemaking – Hazardous Liquid, Gas, Oil and Petroleum Pipeline  
Companies - Safety

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**Recommendation:**

Direct the Staff to prepare a Rule Adoption Order for Commissioner’s review to adopt, repeal and amend chapter 480-75 WAC relating to Hazardous Liquid, Gas, Oil and Petroleum Pipeline Companies - Safety as detailed in Attachment A, excluding proposed WAC 480-75-390 which will be proposed for adoption on November 15, 2002.

**Discussion:**

On August 21, 2000, the Commission filed a Preproposal Statement of Inquiry (CR-101) with the Office of the Code Reviser to initiate a review of the Hazardous Liquid rules in Chapter 480-75 of the Washington Administrative Code (WAC).

On May 24, 2002, the Commission directed the Commission Secretary to file a Notice of Proposed Rulemaking (CR 102) with the Code Reviser. A notice dated June 10, 2002, informed stakeholders of the proposed rule changes and scheduled adoption hearing on July 10, 2002. Further, the notice asked for written comments not later than June 26, 2002. On July 3, 2002, a Notice of Change of Proposed Rule Adoption Hearing was mailed informing stakeholders that the adoption hearing date was changed to July 26, 2002.

Chapter 81.88 RCW directs the Washington Utilities and Transportation Commission (WUTC) to adopt rules for pipeline safety standards for hazardous liquid pipeline companies. In addition, Staff reviewed the rules in Chapter 480-75 pursuant to Executive Order 97-02 for readability and content, with special attention given to need, effectiveness and efficiency, clarity, intent and statutory authority, coordination, cost and fairness.

In drafting new rules and reviewing the current rules, Staff endeavored to draft rules that:

1. Are clearly written, in plain English, so that they are understandable to everyone.
2. Are presented in a comprehensive, well-organized, and informative document.
3. State clearly Commission policies, processes, and procedures.
4. Facilitate voluntary compliance.

The proposed rules establish pipeline safety standards for the transportation of intrastate hazardous liquid. The intent of Chapter 81.88 RCW is to protect the health and safety of the citizens of the State of Washington. The standards proposed in the rules are equal to, or more stringent than those adopted by the federal government. The proposed rules require intrastate hazardous liquid companies to design, construct, operate and maintain their pipeline facilities safely and efficiently. All affected companies have been directly notified of this rulemaking.

The Commission solicited written comments from all interested persons and held three stakeholder workshops that focused on design and construction, operation and maintenance and on reporting requirements. The Commission sent notice of draft rules to all affected stakeholders on November 20, and December 20, 2001, January 9, and February 15, 2002.

### **State Environmental Policy Act:**

As required by RCW 197.11.865 (3) the WUTC prepared an Environmental Checklist. Per WAC 197-11-970 a Determination of Nonsignificance was issued.

### **Hazardous Liquid, Gas, Oil and Petroleum Pipeline**

The proposed draft of Chapter 480-75 WAC (Attachment A) is divided into five sections.

#### **I. General Rules**

The rules in this section have been revised for clarity and consistency. One rule is proposed to be repealed.

#### **II. Design**

The nine new rules in this section require companies to have leak detection systems, pressure relief systems, cathodic protection, and independent level alarms on break out tanks and give geological consideration when constructing a new pipeline. The proposed rules will require companies to construct new pipelines in accordance with ASME B31.4 "Pipeline Transportation Systems for Liquid Hydrocarbon and Other Liquids." The proposed new rules classify new pipelines into class location units. Classes 1 through 4 identify the pipelines' proximity to buildings with Class 1 having 10 or fewer buildings intended for human occupancy and Class 4 having four or more stories above ground. If the classification number is higher the design factors are more rigid and consequently the pipe is stronger. The proposed new rules will also require companies to locate new pump stations not less than 500 feet from buildings intended for human occupancy. The last proposed rule in this section WAC 480-75-390, requires companies to have the ability to rapidly shut down the pipeline in the event of a spill. Proposed WAC 480-75-390 is not proposed for adoption at this time. Staff will continue to work with stakeholders to discuss the intent of the rule and reach consensus on rule language.

### **III. Construction and Repair**

There are seven new proposed rules in this section. For new construction, companies must backfill in a manner that will provide firm support for the pipeline. For new and existing pipelines, the proposed rules include hydrostatic test requirements, welding procedures, as well as identification of the person conducting the welding. The proposed new rules require that pipeline repairs must be done in accordance with ASME B31.4. Construction of new pipelines must be constructed in accordance with ASME B31.4. and inspection of 100% of all new girth welds by radiography or by automatic ultrasonic testing must be done in accordance with API 1104.

### **IV. Operation and Maintenance**

There are six new proposed rules in this section. Before a company moves or lowers a pipeline a study must first be prepared to assure that it will not cause any unsafe condition. When corrosion has been detected, companies must initiate remedial action within 90 days of detection. If a company finds an exposed pipe, it must be checked for mechanical damage, external corrosion, and damage. The proposed new rules will require companies to inspect their right-of-ways once each calendar week. When pipelines are above ground, companies must place pipeline markers identifying the facility. The last proposed rule in this section addresses Changes in Class Locations. Pipelines must re-evaluate the maximum operating pressure when there is a change in a class location. This must be done at least once every five years.

### **V. Reporting**

This section includes seven new proposed rules and repeals one rule. The new proposed rules require submittal of maps identifying the location of pipelines, and specify reporting requirements for proposed construction, pressure testing requirements, depth of cover surveys and a company's operations safety plan.

Comments on the proposed rules for Chapter 480-75 WAC and Staff responses follow.

#### **Comments**

##### **WAC 480-75-100 Definitions**

Olympic Pipeline (Olympic) suggests removing from the definition of "New Pipeline" the following "...a replacement of an existing pipeline of 100 feet or longer...."

##### **Staff Response**

Staff agrees. The definition of "New Pipeline" has been redrafted deleting the phrase suggested by Olympic.

**WAC 480-75-200 Application of Rules.**

Comment

The Energy Facility Site Evaluation Council (EFSEC) suggested that the rule language should clarify who the rules in Chapter 480-75 apply to.

Staff Response

Staff agrees. The rule language has been redrafted for clarification.

**WAC 480-75-300 Leak Detection.**

Comment

The Washington State Department of Ecology (DOE) commented that the proposed requirement to detect leaks at 8% of maximum flow within fifteen minutes or less is inadequate. According to DOE, if this requirement is applied to Olympic Pipeline's 14 inch Renton line a 6800 gallon spill would be the result. DOE proposes a detection of leak at 2% of maximum flow within 15 minutes.

Staff Response

Staff disagrees. The 14-inch Renton line is an interstate line not covered by this rule. There are no intrastate lines of this magnitude being regulated. We concur that leak detection capabilities are 1-2% for mass balance systems. However, running a leak detection system at this level also picks up transient conditions that will increase alarm frequency. The greater the amount of alarms the less confidence the control room operator will have in the leak detection system. Actual experience has shown that the greatest risk associated with leak detection systems is not with the system's capabilities but with the control room operators' level of confidence in the leak detection system. Detection of leaks at 8% of maximum flow gives the operator the flexibility to operate the equipment to account for transient conditions.

**WAC 480-75-310 Geological Considerations.**

Comment

DOE suggests replacing the word "landslides" with "earth movement."

Staff Response

Staff agrees with DOE. The proposed change has been made.

**WAC 480-75-330 Overfill Protection.**

Comment

DOE proposes that the rule language be changed to require that “the high level alarm be monitored by a qualified operator at all times when in operation.” DOE also recommends that the rule reference the Uniform Fire Code (1997 Ed.) which is adopted by the State Fire Marshall. The Uniform Fire Code requires break out tanks to have spill containment of at least 100% of the volume of the largest tank in the containment area.

Staff Response

Staff disagrees. The propose changes requiring a qualified operator and a reference to the Uniform Fire code is already a requirement in CFR 49 Part 195.

**WAC 480-75-360 Class Locations.**

Comment

DOE proposes to change the rule language to include in Class 3 and 4 locations, proximities to Unusually Sensitive Areas and crossings of navigable waterways.

Staff Response

Staff disagrees. This requirement is in CFR 49, Part 195.

**WAC 480-75-370 Design Factor (F) for Steel Pipe.**

Comment

McChord Pipeline Company (McChord) believes that the intent of this rule is for construction of new pipelines. McChord suggest that proposed rule language should clarify that this rule applies to new construction of pipelines.

Staff Response

Staff agrees. WAC 480-75-370 has been redrafted to clarify the intent. The new language reads “...for new pipelines is determined in accordance....”

**WAC 480-75-380 Location of Pump Stations and Breakout Tanks for Hazardous Liquid Pipeline Companies.**

Comment

DOE comments that the 500 foot distance between a pump station and a building intended for human occupancy does not take into consideration the ability of a liquid release to travel quickly away from the release point.

Staff Response

Staff disagrees. The requirement of the proposed rule applies to construction of new pump stations or break out tanks not on the pipeline right-of-way. The integrity Management Plan rule in CFR 49 Part 195 covers consideration of other high consequence areas that may be affected by pipeline segments or facilities.

Comment

Olympic suggests the following rule language change in sentence two. Change “In other areas” to “In areas not zoned.....”

Staff Response

Staff agrees. The rule language has been redrafted.

**WAC 480-75-390 Valve Spacing for Rapid Shutdown.**

This rule is not proposed for adoption at this time. Staff proposes to continue to work with stakeholders on draft rule language.

**WAC 480-75-400 Backfill Requirements.**

Comment

DOE comments that sub-section (2) and sub-section (6) conflict. After discussing this comment with DOE, DOE agrees that there is no conflict.

Comment

Olympic suggests the word “bedding” be included in the title of the rule and in the first sentence.

Staff Response

Staff agrees. The title of the rule now reads “Backfill and Bedding Requirements” and the first sentence of the rule has been redrafted to include the word bedding. The sentence now reads “...for existing pipelines backfilling and bedding must be provided...”

**WAC 480-75-420 (6) (7) Hydrostatic Test Requirements Section.**

Comment

McChord proposes that the rule language in sub-section (6) that requires posting warning signs along freeways, schools and shopping malls when hydrostatic testing is being conducted be eliminated. McChord suggest that this requirement would create a level of concern that is unwarranted.

Staff Response

Staff agrees. The proposed rule language has been redrafted. The proposed language now reads “Precautions such as warning signs must be posted indicating a pipeline is under test conditions.”

Comment

McChord proposes that the requirement in sub-section (7) which requires a company to notify local governments when a test is to be performed be eliminated.

Staff Response

Staff disagrees. Staff believes that good communication with local governments is important for enhancing pipeline safety.

Comment

DOE proposes rule language that requires hydrostatic tests must be conducted with water. In addition, DOE suggests that companies have a disposal plan in place for oil contaminated water consistent with Chapter 173-303 WAC.

Staff Response

Staff disagrees. These rules apply to various types of companies including anhydrous ammonia pipelines. Water cannot be used in pipelines that transport anhydrous ammonia. As for other companies transporting other types of liquids CFR 49, Part 195 addresses the use of water.

Staff agreed to include language in WAC 480-75-420 that informs companies to dispose of oil contaminated water in accordance with Washington State Department of Ecology rules.

Comment

Olympic comments that the proposed rule language is too prescriptive. Olympic observes that the proposed rule language "...could make achievement of success testing of piping very difficult."

Staff Response

Staff agrees. The rule has been redrafted with performance based language that is achievable for the various types of company regulated by Chapter 480-75 WAC.

**WAC 480-75-460 Welding Inspection Requirements.**

Comment

McChord proposes the following language change to the first part of the section to read "For new and repaired segments of existing hazardous liquid pipelines, companies..." This proposed language clarifies that companies are required to inspect 100 percent of all new welds.

Staff Response

Staff agrees. The proposed language has been changed to clarify that the requirement is for 100 percent of all new girth welds. The new language reads "For new pipeline or repaired sections of a pipeline, hazardous liquid pipeline companies must perform 100 percent inspection of all new girth welds by radiography..."

Comment

Olympic also suggests that the rule language needs to clarify that the requirement is for 100 percent of all new girth welds.

Staff Response

Staff agrees. The rule language has been redrafted.

**WAC 480-75-500 Moving and Lowering Hazardous Liquid Pipelines.**

Comment

DOE proposes the inclusion of language that would provide that the person reviewing the study should have some type of minimum qualifications.

Staff Response

Staff disagrees. This requirement is covered in the Operator Qualifications rules, CFR 49, Part 195.

**WAC 480-75-510 Remedial Action for Corrosion Deficiencies.**

Comment

DOE suggest removing the words “as necessary.”

Staff Response

Staff disagrees. The remediation of cathodic protection systems resulting from monitoring data is often done by a trial and error process. In addition, the data may indicate a potential problem which may not be a problem after further evaluation. The operation of cathodic protection systems is greatly dependent on the specific site conditions and environment of the pipeline location. Consequently, it is impractical to develop a “more objective standard”. Staff has also checked the NACE code which is the most comprehensive code for monitoring cathodic protection systems. Staff believes the term “as necessary” is appropriate to give the operator the flexibility needed to operate the cathodic protection system effectively.

**WAC 480-75-520 Inspections During Excavation.**

Comment

DOE asks that the terms “active corrosion”, “general corrosion”, and “corrosion” be defined.

Staff Response

Staff disagrees. These terms are defined in CFR 49, Part 195. Also, these terms are common terms used in the pipeline industry.

**WAC 480-75-530 Right of Way Inspections.**

Comment

DOE suggests that the rule should require companies to retain right-of-way records for a period of five years.

Staff Response

Staff disagrees. The Commission inspectors review these records at each annual inspection. Companies maintain these records from one inspection period to the next. Staff does not agree that there is a need to retain records for five years.

**WAC 480-75-540 Above Ground Facilities.**

Comment

DOE believes that records of inspections should be prepared and retained for a period of five years.

Staff Response

Staff disagrees. The Commission inspectors review these records at each annual inspection. Companies maintain these records from one inspection period to the next. Staff does not agree that there is a need to retain records for five years.

**WAC 480-75-550 Change in Class Location.**

Comment

McChord proposes that the WAC references in this rule be changed to WAC 480-75-360 and WAC 480-75-370.

Staff Response

Staff agrees. The error has been corrected.

Comment

DOE proposes that a review of existing pipelines should be conducted, including analysis of class locations and geologic risk, and the pipelines should be de-rated if necessary.

Staff Response

Staff disagrees. The proposed rule is for the construction of new pipelines only. Applying this requirement to all existing pipelines would place undue financial hardship on the companies.

**WAC 480-75-600 Maps, Drawings and Records.**

Comment

DOE believes that the words “provide” and “make available” do not give the Commission the proper authority to require pipeline companies to hand over the records that may be needed to administer this regulation. DOE suggests using the word “submit.”

Staff Response

Staff disagrees. Per RCW 81.88.080 the Commission shall “require hazardous liquid pipeline companies” .... to “provide accurate maps of their pipeline...” The Commission is required by the statute to develop a state-wide GIS system, therefore maps are needed.

Comment

Olympic comments that maps and records should only be made available to the Commission during the time of an inspection of their facilities for security reasons.

Staff Response

Staff disagrees. The Commission has authority to request records from companies under RCW 80.04.070 and RCW 81.88.100.

**WAC 480-75-610 Reporting Requirements for Proposed Construction.**

Comment

Olympic suggests the following change to the proposed rule language. Remove the word “reconditioning” and change “major reconstruction” to “major construction”.

Staff Response

Staff agrees. The rule language has been redrafted.

**WAC 480-75-620 Pressure Testing Reporting Requirements.**

Comment

DOE suggest that there are no procedures or prerequisites provided on what conditions allow a company to re-rate their pipelines. DOE believes there is a conflict with the class location designation. DOE would like to see the prerequisites to use this procedure be specific and included in the rule language.

Staff Response

Staff disagrees. Determining Maximum Operating Pressure (MOP) is described extensively in 49 CFR 195. The reason we have reviews in class location is to re-rate the pipeline based on class location change. Also the proposed rule requires companies to notify the Commission 45

days prior to pressure testing. This requirement ensures that the Commission has the time to review the proposal and determine if the increase in MOP is justified.

### **WAC 480-75-630 (1) (f) Incident Reporting.**

#### Comment

McChord comments that prior to establishing this rule, incident reporting requirements provided some opportunity for the Commission to be left uninformed until hearing through the media. McChord believes that a report obtained from the media could be purely arbitrary and dependent upon the media's focus. McChord proposes to eliminate sub section (1) (f) of this rule.

#### Staff Response

Staff disagrees. Staff believes that any and all reports via the media are important. The Commission prefers to be notified of all incidents and have the ability to follow up with the company if the media reported. The rule language requires companies to notify the Commission within two hours of discovery of the incident.

#### Comment

DOE suggest removing the word "prompt" and replacing the two hour requirement with a one hour requirement.

#### Staff Response

Staff disagrees. The word prompt is used in conjunction with the two hour requirement. The proposed rule language requires companies to notify the Commission promptly but no later than two hours. Staff believes one hour is not sufficient time for a company to investigate an incident and report the incident to the Commission. The two hour requirement is consistent with CFR 49, Part 195.

#### Comment

Olympic suggests that the Commission adopt USDOT form 7000-1 for reporting incidents.

#### Staff Response

Staff disagrees. Form 7000-1 is used by the Federal Government for reporting spills of five gallons or more. Currently, the Commission's statutory authority requires companies to report spills of 42 gallons or more. Staff is concerned that if form 7000-1 were adopted for reporting spills, companies would not report spills on this form because it is titled "for spills of five gallons or more." Also, Form 7000-1 provides a checklist approach for reporting spills and the proposed rule requires companies to include a narrative pertaining to the incident.

**WAC 480-75-640 Depth-of-Cover Survey.**

Comment

DOE proposes to delete sub sections (2) (a) and (2) (b). DOE questions the use of the word “impracticable” and asks the following questions. 1. Who determines what is impracticable? 2. Sub-section (2) (b) uses the word “equivalent. How is this determined? 3. Does the Commission have approval authority on these modifications?

Staff Response

Staff disagrees. All the questions asked by DOE are covered in CFR 49, Part 195. As for the use of the word “impracticable”, it is consistent with federal regulations. Moreover, Commission inspectors are able to determine what is impracticable. The rule also requires that in instances where the correct cover cannot be attained, additional protection be provided. There are many options for doing this and it would be limiting to specify all the options.

Comment

Olympic requests that the term subsoiling be defined.

Staff Response

Staff agrees. The term subsoiling is defined in WAC 480-75-100 Definitions.

**WAC 480-75-660 Operations Safety Plan.**

Comment

DOE proposes replacement of the word “landslides” with “geological hazards” in subsection (2) (a) (vii). In the same subsection DOE proposes that the language elaborate more on procedures for ensuring that pipeline integrity is maintained by stipulating the applicability for areas currently known to have these hazards as well as newly discovered areas. Also, DOE proposes the addition of a time table as to when these procedures must be in place and ask if the Commission approves the plans.

Staff Response

Staff disagrees. Staff believes that the suggested term “geological hazards” is a vague term.

The Operation and Maintenance Manual (O&M) is for the operator to identify company procedures, not for the Commission to specify the procedures to be followed. We do not approve manuals but ensure that the requirements are appropriate and written in the O & M Manual. The procedures are verified during annual inspections.

Comment

DOE also asks the following questions. 1. Does the Commission have approval authority for the plan? 2. If a plan is submitted that is deficient, how can the Commission ensure that a quality plan is created?

Staff Response

Staff Disagrees. The Commission has copies of all the manuals of intrastate hazardous liquid companies. These manuals are reviewed by Commission staff prior to each annual inspection. The manual must adhere to both Federal and State rules.

Comment

DOE suggests that the requirements for training in subsection (5) need to be more specific.

Staff Response

Staff disagrees. These requirements are explicit in CFR 49, Part 195, Operator Qualifications.

Comment

Olympic comments that the proposed rule language requires companies to have a separate Operation Safety Plan.

Staff Response.

Staff disagrees. The proposed rule language incorporates the requirements of WAC 480-75-660 into a company's current Operation and Maintenance manual. The proposed rule language does not require companies to produce and maintain a separate manual.

**WAC 480-75-999 Adoption by Reference.**

Comment

DOE suggests that this rule include a statement that allows the Commission to approve an alternative standard, such as an update or an older version that may offer more protection than a newer version.

Staff Response

Staff disagrees. The Commission policy is to review each year all references used in its rules. Each current version of a standard is reviewed yearly and it is determined if the current requirement needs to be updated.

Attachments A reflects all of the changes to the existing rules and are in legislative format. Attachment B and C are the Environmental Checklist and the Determination on Nonsignificance respectively.

**Conclusion**

In conclusion, Staff recommends that the Commission direct the Staff to prepare a Rule Adoption Order for Commissioner's review to adopt, amend and repeal chapter 480-75 WAC relating to Commission's Hazardous Liquid, Gas, Oil and Petroleum Pipeline Companies-Safety as detailed in Attachment A, excluding proposed WAC 480-75-390 which will be proposed for adoption on November 15, 2002.

Attachments