

# Safety of Hazardous Liquid Pipelines

(NPRM published 10-13-2015)

(RIN 2137-AE66)  
Docket: PHMSA-2010-0229

February 1, 2016



# Brief History on HL Rule

- Incident near Marshall, MI, on July 25, 2010, spills over 1,000,000 gallons of crude oil into the Kalamazoo River.
- HL ANPRM issued on October 18, 2010; focused on 6 topic areas:
  - 1) Scope of pipeline safety regulations and existing exemptions
  - 2) HCA designation criteria
  - 3) Leak detection and emergency flow restricting devices
  - 4) Valve spacing
  - 5) Repair criteria in non-HCAs
  - 6) Stress corrosion cracking
- Congress issues Pipeline Safety Act of 2011 on January 3, 2012, which includes several provisions relevant to regulating HL pipelines.
- Shortly after, NTSB issues Marshall, MI, investigation report and additional recommendations for revising the HL regulations. GAO also issues a recommendation.
- Rule aims to close appropriate regulatory gaps, ensure operators are detecting and remediating unsafe conditions, and put limited resources to where they will have the most impact.



# Summary of Proposed Rule

- PHMSA is proposing rule changes in eight areas in this NPRM:
  1. Reporting requirements for gravity pipelines
  2. Extend reporting requirements to gathering lines (annual, SRCR, incident)
  3. Require leak detection systems on all new and existing hazardous liquid pipelines
  4. Clarify other requirements including:
    - Requiring integration of pipeline information
    - Periodic verification of the identification of HCAs
    - Periodic verification of segment
  5. Require inspections of pipelines affected by extreme weather and disasters
  6. Require periodic assessment of pipelines that are not covered by present IMP requirements (Non-HCAs)
  7. Require use of in line inspection (ILI) tools for all HCAs within 20 years
  8. Modify the IM repair criteria
    - Require non-HCA repairs when inspected by IM assessment
    - Require that repair decisions explicitly consider tool tolerance



# Comment Summary

- NPRM published 10-13-2015; Comment period ended 01-08-2016
- PHMSA received comments from 73 entities, including:
  - API & Other Trade Associations
  - Members of Public
  - PST & Other Public Interest Groups
  - Individual Operators and Industry Members
  - Environmental Groups
  - Indian Tribal Members
  - Congresswoman Capps



# Out-of-Scope Comments

## Other commenters (no substantive industry comments)

- Expand the definition of HCAs
- Regulate tar sands and dil-bit
- Regulate produced water lines
- Provide standards for leak detection systems
- Provide standards for spacing and location of shut-off valves
- Set technology requirements for Flow Control Technology
- Address concerns with pipelines that cross rivers
- Address various concerns with the effectiveness of the IM program and HCAs
- Expand the information and attributes considered in the IM analysis
- Provide information to the public on inspection reports, notices of violation, and other relevant reports and orders



# Gravity Pipelines

- **ISSUE:** Gravity lines are exempted under current code. PHMSA can not gather any data concerning their safety. PHMSA believes these lines pose same safety risk as low stress lines currently covered under the code.
- **PROPOSAL:** Repeal the gravity line exemption and require reporting.
- **BASIS:** Other pipelines that operate at low pressure and for short distances such as gravity fed lines are subject to Federal regulation. The gravity line exception also may be subject to misuse if it remains.



# Comments on Gravity Pipeline Proposals

- Limit requirements to annual and accident reports
- Use abbreviated form
- Exempt lower risk pipelines:
  - Given distance beyond facility,
  - Minimum yield strength
  - CO<sub>2</sub> pipelines
  - Other otherwise exempted in Section 195.1(b)
- Phase-in implementation over 1 year
- Eliminate safety-related condition reporting requirement
- Expand scope
  - Require GIS mapping
  - Require minimum safety standards
- Include location, operation, condition, and history in reporting
- Make inspection reports, notices of violation, and similar documents available to the public



# Possible Changes for Gravity Lines

- Modified Reporting Forms
- No Mapping
- Exceptions for lower-risk pipelines (i.e. lines less than 1 mile in length and do not travel outside a facility boundary)
- Eliminate safety-related condition reporting
- 1-yr. implementation period





# Gathering Lines

- **ISSUE:** Most rural gathering lines currently exempted from any Code requirements. Only rural lines that are 6”-8” in dia, >20% SMYS, located within ¼ mile of USA are regulated.
- **PROPOSAL:** Modify the scope statement of § 195.1 to include reporting on all diameters of rural gathering lines. Other requirements, such as assessment, anomaly remediation, and establishing a leak detection system would also apply to regulated rural gathering lines (§ 195.11; 6”-8” lines).
- **BASIS:** Congress (Sec 21 of 2011 Act) and GAO have had questions about the safety of hazardous liquid gathering lines.



# Comments on Rural Gathering Line Proposals

- Same major points as for gravity lines
- Plus:
  - Clarify that offshore lines within state waters are not included
  - Unneeded components of reporting
    - Accident reporting is duplicative
    - GIS mapping is unnecessary and could require USACE permitting for pipelines in wetlands
    - NPMS reporting should not be included
  - Allow 1-year period for compliance



# Possible Changes for Gathering Lines

- Modified Reporting Forms
- No Mapping
- Eliminate safety-related condition reporting
- 1-yr. implementation period



# Expanding Use of Leak Detection Systems

- **ISSUE:** Operators are currently required to have a leak detection system but requirements are not clear. This proposal restructures existing requirement to ensure that all pipelines are designed to include a leak detection system and operate and maintain per specified standards.
- **PROPOSAL:** (a) Design: Amend § 195.134 to require that all new hazardous liquid pipelines be designed to include leak detection systems. (b) O&M: Under the proposed §195.444, operators would be required to evaluate & modify existing HL pipelines as necessary, to have a leak detection system capable of protecting the public, property, and environment.
- **BASIS:** Recent pipeline incidents such as those in Marshall, Michigan, and Salt Lake City, Utah, suggest adequate means for identifying leaks is of high importance.

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# Comments on Expanded Use of Leak Detection Systems

- Exempt gathering lines from requirement to install and maintain leak detection systems
- Exempt certain non-gathering line sections less than 1 mile in length and/or those located within facilities where they pose no risk to the public
- Set schedule that reflects current systems on pipelines
  - 5-year installation and implementation time frame for leak detection systems
- Broaden applicability to all existing hazardous liquids lines and all lines under construction at rulemaking
- Provide clear schedule for leak detection implementation for certain pipelines
- Set more stringent leak detection requirements for sensitive areas
- Establish binding requirements for leak detection and repair protocols
- Require automatic shutdown systems

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# Possible Changes for Leak Detection Systems

- Implementation period of 1, 3, or 5 years.
- Offshore applicability



# Clarification of Other Requirements

- **ISSUE:** Operators currently are not fully integrating pipeline data across all data sources. Additionally, periodic verification of HCAs is lacking among some operators.
- **PROPOSAL:** Revise Section 195.452(g) – require specificity to information analysis:
  - Specify a number of pipeline attributes that must be analyzed.
  - Integrate all sources of information, including spatial relationships, regarding anomaly pipeline conditions.
- **BASIS:**
  - Inspection experience indicates weakness in this area.
  - Operators collecting much information, but integrated analysis is often inadequate.

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# Clarification of Other Requirements (cont.)

- **PROPOSAL:** Revise Section 195.452 (j) to require periodic verification of HCA identification and segments:
  - Operators verify segment identification annually.
  - Determine whether factors changed.
  - Re-perform segment analyses only for significant changes.
- **BASIS:**
  - No explicit deadlines for HCA identification.
  - No deadline to implement actions in response to data and risk analyses.
  - IM inspections identify some operators have not:
    - Analyzed facilities, or
    - Implemented protective and mitigative measures.

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# Comments on Other Clarifications

- Phase-in data integration requirements over 5 years
- Allow operators to determine the information and attributes to be included in data analysis and integration
- Revise language suggesting that GIS is a requirement
- Include injection wells in the definition of regulated pipeline infrastructure



# Possible Changes for Other Clarifications

- Implementation period of 1, 3, or 5 years.



# Possible Voting Language for Non-Controversial Issues

Provisions of the proposed rule relative to gravity lines, gathering lines, leak detection, and clarifying other requirements as published in the *Federal Register* and the Draft Regulatory Evaluation are technically feasible, reasonable, cost-effective, and practicable **if, as amended during this meeting, the changes made to these provisions are adopted.**



# Inspections Following Extreme Weather Events or Disasters

- **ISSUE:** Natural disasters, such as storms, earthquakes, and floods, can damage or disrupt pipeline operations and cause fuel shortages and rising prices. There are no current requirements for post-event inspections of pipelines after natural disasters.
- **PROPOSAL:** Require operators to inspect pipelines that may have been affected by natural disasters; § 195.414.
- **BASIS:** Timely inspection will ensure detection and remediation of any unsafe conditions created by unusual events.



# Comments on Inspections Following Extreme Weather Events

- Clarify “cessation of event” and allow operators to use judgement in prioritizing response
- Eliminate requirement because duplicative of existing emergency planning requirements in 195.402
- Require proactive and preventive measures for anticipated extreme weather or in certain vulnerable areas (e.g. water crossings)
- Require immediate reporting and make reporting available to the public
- Clarify/define extreme weather event, appropriate method for performing the inspection, responsible party, potentially affected facility, other similar event
- Clarify and justify 72-hour timeline
- Allow tailoring for site-specific conditions
- Establish timeline for mitigating or repairing anomalies



# §195.414 Section A: General

## NPRM Proposed Text:

**(a)General.** Following an extreme weather event such as a hurricane or flood, an earthquake, a natural disaster, or other similar event, an operator must inspect all potentially affected pipeline facilities to ensure that no conditions exist that could adversely affect the safe operation of that pipeline.

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# Comments on §195.414 Section A: General

- *PHMSA needs to account for:*
  1. *Nuances in weather events*
  2. *Nuances in pipeline construction/design.*
- *Request definite conditions that would trigger an inspection or if just occurrence of event would trigger*
- *Request recognition that these events can have widely disparate impacts on lines and operators*

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# Possible Revised Language

## §195.414 Section A: General

### Example Revised Proposed Text (adapted from API's comments):

**(a)General.** Following an extreme weather event such as a hurricane or flood, an earthquake, a natural disaster, or other similar events **that the operator determines to have a significant likelihood of damage to infrastructure**, an operator must inspect all potentially affected pipeline facilities to **detect conditions that could adversely affect the safe operation of that pipeline.** ~~ensure that no conditions exist that could adversely affect the safe operation of that pipeline.~~





# §195.414 Section B: Inspection Method

## NPRM Proposed Text:

**(b) Inspection method.** An operator must consider the nature of the event and the physical characteristics, operating conditions, location, and prior history of the affected pipeline in determining the appropriate method for performing the inspection required under paragraph (a) of this section.



# Comments on §195.414 Section B: Inspection Method

- *Inspection standards should be articulated, feasible*



# Possible Revised Language

## §195.414 Section B: Inspection Method

### Example Revised Proposed Text:

**(b) Inspection method.** An operator must consider the nature of the event and the physical characteristics, operating conditions, location, and prior history of the affected pipeline in determining the appropriate method for performing the **initial inspection to determine damage and the need for additional assessments** required under paragraph (a) of this section.



# §195.414 Section C: Time Period

## NPRM Proposed Text:

**(c)Time period.** The inspection required under paragraph (a) of this section must occur within 72 hours after the cessation of the event, or as soon as the affected area can be safely accessed by the personnel and equipment required to perform the inspection as determined under paragraph (b) of this section.



# Comments on §195.414 Section C: Time Period

- *“Cessation” of an event should be tied to safety*
- *Inspections may need to exceed 72 hours due to unavailable equipment/personnel and safety concerns*
- *Operators should have option to document when time period isn’t feasible*



# Possible Revised Language

## §195.414 Section C: Time Period

**Example Revised Proposed Text (adapted from API's comments):**

**(c)Time period.** The inspection required under paragraph (a) of this section must occur within 72 hours after the cessation of the event, **defined as the point in time when ~~or as soon as~~** the affected area can be safely accessed by the personnel and equipment required to perform the inspection as determined under paragraph (b) of this section.

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# §195.414 Section D: Remedial Action

## NPRM Proposed Text:

**(d) Remedial action.** An operator must take appropriate remedial action to ensure the safe operation of a pipeline based on the information obtained as a result of performing the inspection required under paragraph (a) of this section. Such actions might include, but are not limited to:

- (1) Reducing the operating pressure or shutting down the pipeline;
- (2) Modifying, repairing, or replacing any damaged pipeline facilities;
- (3) Preventing, mitigating, or eliminating any unsafe conditions in the pipeline right-of-way;
- (4) Performing additional patrols, surveys, tests, or inspections;
- (5) Implementing emergency response activities with Federal, State, or local personnel; and
- (6) Notifying affected communities of the steps that can be taken to ensure public safety.



# Comments on §195.414 Section D: Remedial Action

- *Content considered too duplicative to Emergency Response Plans in 195.402*
  - *402 requires a manual that includes procedures for emergency events, including natural disasters that affect pipelines*
  - *Proposed rule language prescribes actions, not a manual*
- *There were no specific suggestions on regulatory language for this section*





# Possible Revised Language

## §195.414 Section D: Remedial Action

### Example Revised Proposed Text (**no changes**):

**(d) Remedial action.** An operator must take appropriate remedial action to ensure the safe operation of a pipeline based on the information obtained as a result of performing the inspection required under paragraph (a) of this section. Such actions might include, but are not limited to:

- (1) Reducing the operating pressure or shutting down the pipeline;
- (2) Modifying, repairing, or replacing any damaged pipeline facilities;
- (3) Preventing, mitigating, or eliminating any unsafe conditions in the pipeline right-of-way;
- (4) Performing additional patrols, surveys, tests, or inspections;
- (5) Implementing emergency response activities with Federal, State, or local personnel; and
- (6) Notifying affected communities of the steps that can be taken to ensure public safety.

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# Possible Voting Language for Inspections Following Extreme Weather Events

Provisions of the proposed rule relative to **inspections following extreme weather events** as published in the *Federal Register* and the Draft Regulatory Evaluation are technically feasible, reasonable, cost-effective, and practicable **if, as amended during this meeting, the following changes are made relative to §195.414:**

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# Periodic Assessment of Pipelines

- **ISSUE:** Lines outside HCAs currently are not assessed periodically primarily due to the lack of a regulatory requirement.
- **PROPOSAL:** § 195.416 would require operators to assess non-IM pipelines at least once every 10 years using either ILI or other equivalent methods.
- **BASIS:** Such a requirement would ensure operators obtain information necessary for prompt detection and remediation of corrosion and other deformation anomalies in all locations, not just HCAs.



# Comments on Periodic Assessments

## • Methods and requirements

- Allow use of any of the assessment methodologies currently allowed under IM Additional inspection requirements and notifications
- Require notification to PHMSA only when an operator chooses to use "other technology".
- Recommend approach similar to proposed modifications to section 195.452(c)(1)(i) instead of notification process
- Clarify that alternative methods must account for inspection along the entire pipeline both inside and outside HCAs
- Prohibit waivers for ILI tools
- Prohibit direct assessment
- Require third party verification of inspection reports

## • Exemptions for lower risk pipelines

- Limit and specify the type of pipelines to which the requirements would apply (e.g., transmission lines only)
- Exempt short lines
- Exempt CO2 pipelines

## • Phase in period

- Set implementation schedule of 10-12 years.

## • Inspection intervals

- Revise reassessment intervals based on engineering and industry standards
- Reduce the time interval of inspection (generally 5 years)

## • Additional requirements

- Make inspection reports publically available
- Require submission of primary inspection results and data to PHMSA
- Require risk assessment on non-IM pipelines
- Require annual inspections for all federally-regulated hazardous liquid pipelines

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# Possible Changes for Periodic Assessments

- Limit to transmission lines (line pipe)
- Allow hydrotest as initial assessment/set baseline
- Coordinate language with 195.452(c)(1)(i)
- Applicability to offshore lines



# Possible Revisions to Periodic Assessment Language

NPRM Language, §195.416:

(a) *Scope.* This section applies to pipelines that are not subject to the integrity management requirements in §195.452.

Possible Revision:

(a) *Scope.* This section applies to **transmission** pipelines that are not subject to the integrity management requirements in §195.452.

Possible Revision:

(a) *Scope.* This section applies to ~~pipelines that are~~ **line pipe** not subject to the integrity management requirements in §195.452.



# Possible Revisions to Periodic Assessment Language

NPRM Language, §195.416:

- (c) *Method.* The assessment required under paragraph (b) of this section must be performed with an in-line inspection tool or tools capable of detecting corrosion and deformation anomalies, including dents, cracks, gouges, and grooves, unless an operator:
- (i) Demonstrates that the pipeline is not capable of accommodating an inline inspection tool; and that the use of an alternative assessment method will provide a substantially equivalent understanding of the condition of the pipeline; and
  - (ii) Notifies the Office of Pipeline Safety (OPS) 90 days before conducting the assessment by [...]



# Possible Revisions to Periodic Assessment Language

Possible Revision, §195.416 (aligned with §195.452):

(c) *Method.* An operator must perform the integrity assessment required under paragraph (b) of this section by in-line inspection tool unless it is impracticable, then use methods (2), (3), or (4) of this paragraph. The methods an operator selects to assess low frequency electric resistance welded pipe, lap welded pipe, pipe with a seam factor less than 1.0 as defined in §195.106(e), or lap welded pipe susceptible to longitudinal seam failure must be capable of assessing seam integrity and of detecting corrosion and deformation anomalies.

(1) Internal inspection tool or tools capable of detecting corrosion, and deformation anomalies including dents, cracks (pipe body and weld seams), gouges, and grooves. An operator using this method must explicitly consider uncertainties in reported results (including tool tolerance, anomaly findings, and unity chart plots or equivalent for determining uncertainties) in identifying anomalies.

(2) A pressure test conducted in accordance with subpart E of this part;

(3) External corrosion direct assessment in accordance with §§195.588; or

(4) Other technology that the operator demonstrates can provide an equivalent understanding of the condition of the line pipe.

(i) An operator choosing this option must notify the Office of Pipeline Safety (OPS) 90 days before conducting the assessment by:

(A) Sending the notification, along with the information required to demonstrate compliance with paragraph (c)(3) of this section, to the Information Resources Manager, Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, 1200 New Jersey Avenue SE., Washington, DC 20590; or

(B) Sending the notification, along with the information required to demonstrate compliance with paragraph (c)(3) of this section, to the Information Resources Manager by facsimile to (202) 366-7128.

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# Possible Voting Language for Periodic Assessments

Provisions of the proposed rule relative to **periodic assessments** as published in the *Federal Register* and the Draft Regulatory Evaluation are technically feasible, reasonable, cost-effective, and practicable **if, as amended during this meeting, the following changes are made relative to §195.416:**



# Using ILI Tools in all HCAs

- **ISSUE:** Not all pipelines can accommodate passage of ILI tools.
- **PROPOSAL:** Establish a new provision in Section 195.452(n) to require all HCA pipelines be capable of accommodating ILI tools within 20 years.
- **BASIS:** Increased use of ILI methods (“pigging”) will further promote public safety and the environment in these high-risk areas.



# Comments on Using ILI Tools in all HCAs

- Account for accuracy of ILI tools when evaluating inspection tools/include standards
- Allow operators to exercise expertise and judgement in selecting integrity assessment method
- API/AOPL suggested not adopting this proposal due to cost/benefit concerns
- Expand applicability to all hazardous liquid pipelines or all new pipelines in HCAs
- Limit ILI exemptions
- Establish standards for ILI tools, including detection of stress corrosion cracking
- Require other inspection tools and methods when certain types of anomalies are detected
- Specify different compliance periods for pipelines based on various factors
- Set 5-year implementation for newly identified areas
- Require operator submit implementation plan with progress reporting
- Require operators submit inline inspection data to PHMSA for review and verification

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# Possible Changes for Using ILI Tools in all HCAs

- Do not adopt
- Shorter implementation period than proposed
- Require justification for alternative testing methods after 20 years



# Possible Revised Language for Using ILI Tools in all HCAs §195.452(n)

NPRM Language:

*(2) General.* An operator must ensure that each pipeline is modified to accommodate the passage of an instrumented internal inspection device by [date **20 years** from effective date of the final rule].



# Possible Revised Language for Using ILI Tools in all HCAs §195.452(n)

(4) *Lack of accommodation.* An operator may file a petition under § 190.9 of this chapter for a finding that the basic construction (*i.e.* length, diameter, operating pressure, or location) of a pipeline cannot be modified to accommodate the passage of an internal inspection device **or that the operator determines it would abandon or shut-down a pipeline as a result of the cost to comply with the requirement of this section.**



# Possible Voting Language for Using ILI Tools in all HCAs

Provisions of the proposed rule relative to **using ILI tools in all HCAs** as published in the *Federal Register* and the Draft Regulatory Evaluation are technically feasible, reasonable, cost-effective, and practicable **if, as amended during this meeting, the following changes are made relative to §195.452(n):**



# Modifying Repair Criteria

- **ISSUE:** Current repair criteria does not reflect proper prioritizing of abnormal pipeline conditions found in the field.
  - HCA Repair schedule: Immediate, 60-day, 180-day, and monitored condition.
  - Non- HCA Repair schedule: Immediate & reasonable time.  
No anomalies specified. Leaves entirely at operator's discretion.
- **PROPOSAL:** Modify repair criteria as follows:
  - Repair Schedule: Immediate, 9 months (18 months for non-HCA), and monitored condition.
  - Failure pressure ratio (P burst/ MOP) increased by 10% margin (from 1 to 1.1).
  - Included additional anomalies under "Immediate" repair (e.g. SCC, seam corrosion, all dents with stress risers).
  - Explicitly consider tool tolerance for repair decisions.
  - Collect ILI data from HCAs and non-HCA segments for repair decision.
- **BASIS:** Inspection experience identified weaknesses in repair decisions in response to ILI data.





# Comments on Modified Repair Criteria

- **Applicability**

- Exempt pipeline segments with low operating pressures from certain requirements
- Clarify applicability to pipelines under 195.452
- Limit applicability of non-HCA criteria to non-HCA transmission lines only

- **Criteria**

- Add 270-day condition with 20% dents threshold
- Set 1-year and 2-year criteria
- Incorporate industry recognized evaluation methods to calculate remaining strength of pipe.
- Eliminate SCC and SSWC immediate repair criteria
- Allow prioritization of repair of HCA segments over non-HCA segments
- Establish standard for the prevention, detection, and remediation of SSCC and SCC
- Maintain the 60 and 180-day repair categories
- Set more stringent immediate repair category

- **Timing**

- Provide more time to address repairs in offshore pipelines (no time proposed)

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# Repair Criteria for §§195.422 and 195.452

Anomaly Type	Existing Code (§195.452)	NPRM Anomaly Type	NPRM Proposal (§§195.422 and 195.452)
ML > 80%	Immediate	ML > 80%	Immediate
Anomaly with FPR < 1.0	Immediate	Anomaly with FPR < 1.1	Immediate
TSD w/ ML, Cracking, or Stress Riser	Immediate	Any dent with ML, Cracking, or Stress Riser	Immediate
BSD w/ ML, Cracking, or Stress Riser	60-day		
TSD > 6%	Immediate	TSD > 6%	Immediate
(no current requirement)		Any indication of significant SCC	Immediate
		Any indication of SSWC	Immediate
Other Requiring Immediate Action	Immediate	Other Requiring Immediate Action	Immediate



# Repair Criteria for §§195.422 and 195.452

Anomaly Type	Existing Code	NPRM Anomaly Type	NPRM Proposal 195.452/195.422
TSD > 3%	60-day		
TSD > 2%	180-day	TSD >2%	9 months/18 months
Dent > 2% at weld	180-day	Dent > 2% at weld	9 months/18 months
BSD > 6%	180-day	BSD > 6%	9 months/18 months
$P_{safe}/MOP < 1.0$	180-day	$P_{safe}/MOP < 1.0$	9 months/18 months
General Corrosion > 50%	180-day	General Corrosion > 50%	9 months/18 months
ML > 50% at crossing/circumferential/weld	180-day	ML > 50% at crossing/circumferential/weld	9 months/18 months
Cracks	180-day	Cracks	9 months/18 months
Corrosion of or along seam	180-day	Corrosion of or along seam	9 months/18 months
Gouge or Groove > 12.5%	180-day	Gouge or Groove > 12.5%	9 months/18 months
Other Conditions	As appropriate	Other Conditions	As appropriate

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# Revision Comments for NPRM §§195.422 and 195.452

NPRM Anomaly Type	NPRM Proposal	API Anomaly Type	API Proposal
ML > 80%	Immediate	ML > 80%	Immediate
Anomaly with FPR < 1.1	Immediate	Anomaly with FPR < 1.1	Immediate
Any dent with ML, Cracking, or Stress Riser	Immediate	Any dent with <b>ML, Gouge, Crack, Stress Riser/unless analysis shows minimal risk</b>	Immediate
TSD > 6%	Immediate	TSD > 6%/unless analysis shows minimal risk	Immediate
Any indication of significant SCC	Immediate	<b>Any indication of significant SCC/SSWC Likely crack anomalies &gt; 70%</b>	Immediate
Any indication of SSWC	Immediate		
Other Requiring Immediate Action	Immediate	Other Requiring Immediate Action; <b>Different Methods of Calculation</b>	Immediate



# Revision Comments for NPRM

NPRM Anomaly Type	API Anomaly Type	NPRM & API Proposal 195.452/195.422
TSD > 2%	TSD >2%/unless analysis shows minimal risk	9 months/18 months
Dent > 2% at weld	Dent > 2% at weld/unless analysis shows minimal risk	9 months/18 months
BSD > 6%	BSD > 6%/unless analysis shows minimal risk	9 months/18 months
$P_{safe}/MOP < 1.0$	$P_{burst}/MOP < 1.25$	9 months/18 months
General Corrosion > 50%	General Corrosion > 50%	9 months/18 months
ML > 50% at crossing/circumferential/weld	ML > 50% at crossing/circumferential/weld	9 months/18 months
Cracks	Likely or possible crack >50%	9 months/18 months
Corrosion of or along seam	<del>Corrosion of or along seam</del> Dent with Corrosion/unless analysis shows minimal risk	9 months/18 months
Gouge or Groove > 12.5%	Gouge or Groove > 12.5%	9 months/18 months

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# Possible Changes to Repair Criteria

- Keep timeframes as proposed
- Keep the majority of anomaly types and conditions as proposed, except for the following:
  - $P_{\text{safe}}/\text{MOP} < 1.0$  to  $P_{\text{burst}}/\text{MOP} < 1.25$
  - Proposed SCC/SSWC IVP language



# Possible Voting Language for Modified Repair Criteria

Provisions of the proposed rule relative to **modified repair criteria** as published in the *Federal Register* and the Draft Regulatory Evaluation are technically feasible, reasonable, cost-effective, and practicable **if, as amended during this meeting, the following changes are made relative to §§ 195.422 and 195.452:**



# Committee Action

- The Liquid Pipeline Advisory Committee (LPAC) is to consider the proposed rule titled:
  - “Safety of Hazardous Liquid Pipelines” as published in the *Federal Register* (80 FR 61610) on October 13, 2015, for its technical feasibility, reasonableness, cost-effectiveness, and practicability.





# Final Voting Language for HL NPRM

The proposed rule as published in the *Federal Register* and the Draft Regulatory Evaluation are technically feasible, reasonable, cost-effective, and practicable **if, as amended during this meeting, the specific changes to the rule's provisions are incorporated.**

