



U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

Administrator

1200 New Jersey Ave., S.E.
Washington, DC 20590

APR 15 2008

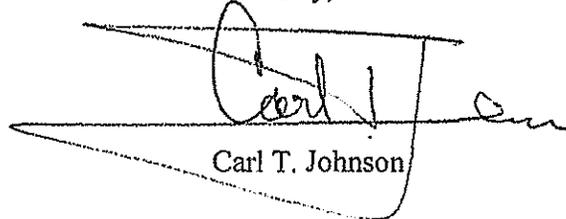
The Honorable Rick Boucher
Chairman
Committee on Energy and Commerce
Subcommittee on Energy and Air Quality
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

I am responding to a request made at the March 12 House Energy and Commerce Subcommittee on Energy and Air Quality oversight hearing on The Pipeline, Inspection, Protection, Enforcement, and Safety Act of 2006: Implementation Review and Discussion of Safety Reassessment Intervals for Natural Gas Pipelines. As requested, I am providing a detailed statement explaining how the agency would propose to establish and enforce risk-based criteria for extending the current seven-year reassessment interval for gas transmission pipelines.

Please let me know if I can be of further assistance. An identical letter has been sent to the Ranking Member of the House Energy and Commerce Subcommittee on Energy and Air Quality.

Sincerely,



Carl T. Johnson

Enclosure



U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

Administrator

1200 New Jersey Ave., S.E.
Washington, DC 20590

APR 15 2008

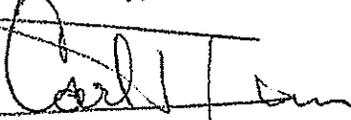
The Honorable Fred Upton
Ranking Member
Committee on Energy and Commerce
Subcommittee on Energy and Air Quality
U.S. House of Representatives
Washington, DC 20515

Dear Congressman Upton:

I am responding to a request made at the March 12 House Energy and Commerce Subcommittee on Energy and Air Quality oversight hearing on The Pipeline, Inspection, Protection, Enforcement, and Safety Act of 2006: Implementation Review and Discussion of Safety Reassessment Intervals for Natural Gas Pipelines. As requested, I am providing a detailed statement explaining how the agency would propose to establish and enforce risk-based criteria for extending the current seven-year reassessment interval for gas transmission pipelines.

Please let me know if I can be of further assistance. An identical letter has been sent to the Chairman of the House Energy and Commerce Subcommittee on Energy and Air Quality.

Sincerely,



Carl T. Johnson

Enclosure

**Gas Transmission Pipeline Integrity Management Assessment:
Proposed Reassessment Interval Extension Review**

Contents

Executive Summary	1
Introduction.....	2
Background.....	3
Current Regulatory Requirements	3
Basis for Considering Extended Reassessment Intervals	4
Continued Oversight	6
Public Consideration.....	7
Scenario 1: If Statutory Requirement was Amended: PHMSA’s Proposed Approach to Extending Reassessment Intervals.....	8
Scenario 2: If Statutory Requirement is not Amended: PHMSA’s Proposed Approach to Extending Reassessment Intervals by Special Permit	13
Application of General Waiver Authority to Seven-Year Reassessment Requirement	13
Special Permit Process.....	15

Executive Summary

Gas transmission pipeline operators are required to physically assess the condition of their pipeline segments in high consequence areas every seven years to identify corrosion. This requirement is pursuant to a provision in the Pipeline Safety Improvement Act (PSIA) of 2002 and Federal Pipeline Safety Regulations. The U. S. Government Accountability Office (GAO) has recommended that this statutory requirement be amended to permit operators to reassess at intervals based on risk factors, technical data, and engineering analyses.¹ The Pipeline and Hazardous Materials Safety Administration (PHMSA) has been asked to provide a detailed statement explaining how the agency would propose to establish and enforce risk-based criteria for extending the current seven-year reassessment interval for gas transmission pipelines².

This statement describes two scenarios:

First, if the statutory requirement was amended, PHMSA would establish, by rulemaking, risk-based criteria that operators must meet to warrant extending their assessments beyond seven-year intervals. Operators interested in extending reassessments to longer periods would be required to notify PHMSA or a state agency for an intrastate transmission pipeline, one year in advance of the scheduled reassessment and submit information demonstrating their conformance with the criteria before extending the assessment schedule. PHMSA will review the notifications to assess whether the criteria

¹ GAO, "Risk-Based Standards Should Allow Operators to Better Tailor Reassessments to Pipeline Threats," GAO-06-945, September 2006.

² House Subcommittee on Energy and Air Quality hearing, March 12, 2008

in the rule have been met. PHMSA will post information concerning all notifications on its integrity management web site.

Second, if the statutory requirement is not amended, PHMSA could use the specific authority granted by Congress for operators to apply for a waiver (49 U.S.C. § 60109(c)(5)). PHMSA would issue special permits to operators, allowing them to extend the assessment interval, based on the conditions of the permit. PHMSA would conduct a technical review of an operator's request to determine that the criteria are met, provide for public notice and comment prior to granting the permit, as required by statute, make a determination, and then if conditions for the permit are favorable, grant the permit and monitor the operator's performance with the terms of the permit. Waivers for intrastate pipelines under state regulatory authority would be issued by states following a statutorily mandated review by PHMSA.

Introduction

Integrity management (IM) requirements for gas transmission pipelines (49 C.F.R. Part 192, Subpart O) currently require an assessment of each pipeline segment located in a high consequence area at intervals not to exceed seven years. This requirement was provided in the regulation pursuant to a requirement in the Pipeline Safety Improvement Act of 2002 (PSIA) (Pub. L. 107-355).

This statement describes processes that would be used by PHMSA to vary the length of the reassessment interval from the fixed seven year maximum cycle. PHMSA describes

the background of the current requirement. We discuss two options for implementing a risk-based approach to reassessment: if the statutory mandate is amended, PHMSA would promulgate regulation and if the mandate remains in place, PHMSA would consider granting special permits.

Background

Current Regulatory Requirements

PHMSA's IM regulations for gas transmission pipelines require periodic assessment of the condition of pipeline segments in high consequence areas. The PSIA required that periodic reassessment of gas transmission pipelines must be conducted at a minimum of once every seven years. The regulations require corrosion-focused assessments at least every seven years, consistent with that requirement.

The regulations require that a pipeline operator use engineering and risk analyses to determine the frequency at which risk-based assessments must be conducted. Based on pipeline segment risk, the required risk-based assessment interval may be shorter than seven years. For example, under the current regulatory scheme, the allowable risk-based interval is limited to three or five years if the pressure to which the pipe has been tested is significantly less than the maximum the pipe can withstand. The regulation sets a maximum interval for risk-based assessments, regardless of the analyses, depending upon the operating pressure (and thus stress level) of the pipeline. These maximums are:

- 10 years for pipe operating above 50 percent of specified minimum yield strength (SMYS),
- 15 years for pipe operating between 30 and 50 percent SMYS, and
- 20 years for pipe operating below 30 percent SMYS.

In addition to previously allowed general waivers, the PSIA also allowed PHMSA to waive requirements under certain specialized conditions, stating that PHMSA “may waive or modify any requirement for reassessment of a facility ... for reasons that may include the need to maintain local product supply or the lack of internal inspection devices” provided that a determination is made that such waiver is not inconsistent with pipeline safety.³

Basis for Considering Extended Reassessment Intervals

Gas transmission pipeline operators have been conducting IM assessments for five years. Over half of the pipeline mileage in high consequence areas (HCA) has been assessed over this period. Approximately 10 times as much pipeline mileage outside of HCAs has also been inspected as part of these assessments. Operators have found and repaired over 700 defects in HCAs as a result of these assessments. The rule requires that defects requiring repair found during an assessment must be repaired such that the operator can “ensure the condition is unlikely to pose a threat to the integrity of the pipeline until the

³ 49 U.S.C. § 60109(c)(5).

next reassessment of the covered segment.”⁴ At the same time, the assessments have shown that many gas transmission pipeline segments are in good condition despite many years in service, having few, if any, defects meeting the criteria for repair. These results are particularly significant, because operators are required to inspect their pipeline segments that pose the highest risk first.

PHMSA and our State partners have developed and implemented for jurisdictional operators a comprehensive inspection program to assure operators have addressed requirements of the IM regulation. We have assured the effectiveness of these inspections through careful selection and qualification of State and Federal inspectors, through continued monitoring of inspection results, and through review of annual reports from operators describing implementation progress and the nature of defects they have identified and repaired.

This experience has formed a basis for PHMSA to consider how to extend reassessment intervals. We believe that the pipeline segments for which an extended reassessment interval could be considered are those in which the pipe has been demonstrated to be sound and the engineering and risk analysis do not indicate a likelihood of time-dependent integrity problems occurring during an extended reassessment interval. PHMSA would review the circumstances for each segment for which an extension is proposed to determine if an extended interval is appropriate for that segment.

⁴ 49 C.F.R. § 192.933(a)

Continued Oversight

PHMSA will continue its regular oversight of pipeline operator IM programs, whether or not an extended reassessment interval is authorized. PHMSA conducts inspections of operator IM programs using detailed written protocols that consider all aspects of the program. This includes a review of the engineering and risk analysis process, and the results of those analyses. It also considers the operator's process to use those results for determining the intervals for all types of IM assessments.

PHMSA has inspected the IM programs of 58 gas transmission pipeline operators to date. Our State partners have inspected all operators under their jurisdiction. The inspection and enforcement record reflects that the enforcement action most actively used is a Notice of Amendment, which requires the operator to revise its plans or procedures to assure that necessary actions are carried out. This action has been used in 25 of 31 enforcement instances and is evidence of PHMSA's experience with making determinations of adequacy of operator's assessment planning and execution.

Some gas transmission pipelines subject to IM requirements are under State regulatory jurisdiction. States exercise oversight under a certificate granted by PHMSA pursuant to 49 U.S.C. § 60105 or an agreement with PHMSA pursuant to 49 U.S.C. § 60106. States exercising oversight of intrastate transmission pipelines under a certificate must impose, at a minimum, the same requirements as PHMSA regulations, and may add additional requirements for these lines if such requirements are compatible with the Federal requirements. Requests for a waiver of compliance by State authorities are reviewed by

the States according to their own procedures and must also be reviewed by PHMSA pursuant to 49 U.S.C. § 60118. Our review of State programs and any waivers they may propose would assure the same level of vigilance as for pipelines directly regulated by PHMSA.

Public Consideration

PHMSA conducted a public meeting in January 2008 at which we described the criteria we would use to gauge the suitability of extended reassessment intervals and our planned approach for using special permits to extend reassessment intervals where justified. The draft technical acceptance criteria discussed in that meeting are substantially the same as those described below for use under either scenario (i.e., whether the statutory provision is revised or PHMSA uses special permits to grant waivers of compliance). Members of the public who attended, including representatives of industry and the general public, expressed agreement with PHMSA's proposed technical criteria. Commenters expressed a desire for consistency and a repeatable process for approval of special permits.

PHMSA has taken these comments into account in refining the proposal described here. We have expanded the technical criteria to help assure consistency in approving applications, and we have refined the review process to assure repeatability. Before considering applications for special permits, PHMSA will publish a notice in the *Federal Register* describing the review process and the criteria by which applications will be reviewed.

Scenario 1: If Statutory Requirement were Amended: PHMSA's Proposed Approach to Extending Reassessment Intervals

If Congress amends the statutory requirement to assess gas transmission pipelines at least every seven years, PHMSA would institute a rulemaking to permit operators to reassess at intervals based on risk factors, technical data, and engineering analyses. The current regulatory requirement to conduct an assessment at least every seven years would be retained, but PHMSA would establish a process by which operators could extend the assessment interval if certain criteria established in the rulemaking were met.

As PHMSA currently envisions the rule concept, operators who desire to extend the assessment beyond seven-year intervals would be required to notify PHMSA one year in advance. PHMSA would require operators to include in these notifications basic information about the pipeline segment(s) for which extension is sought, including:

- Location(s) of the pipeline segments for which a deviation is sought,
- Date when the baseline assessment was completed, and what method was used,
- Whether all defects identified in the baseline assessment as requiring remediation have been addressed, and
- A certification that a risk-based reassessment interval has been determined in conformance with the requirements of the rule.

The rule would also establish criteria that must be met. Table 1 presents a draft set of the criteria, which may be further refined as our rulemaking proceeds.

Table 1 – Draft Criteria

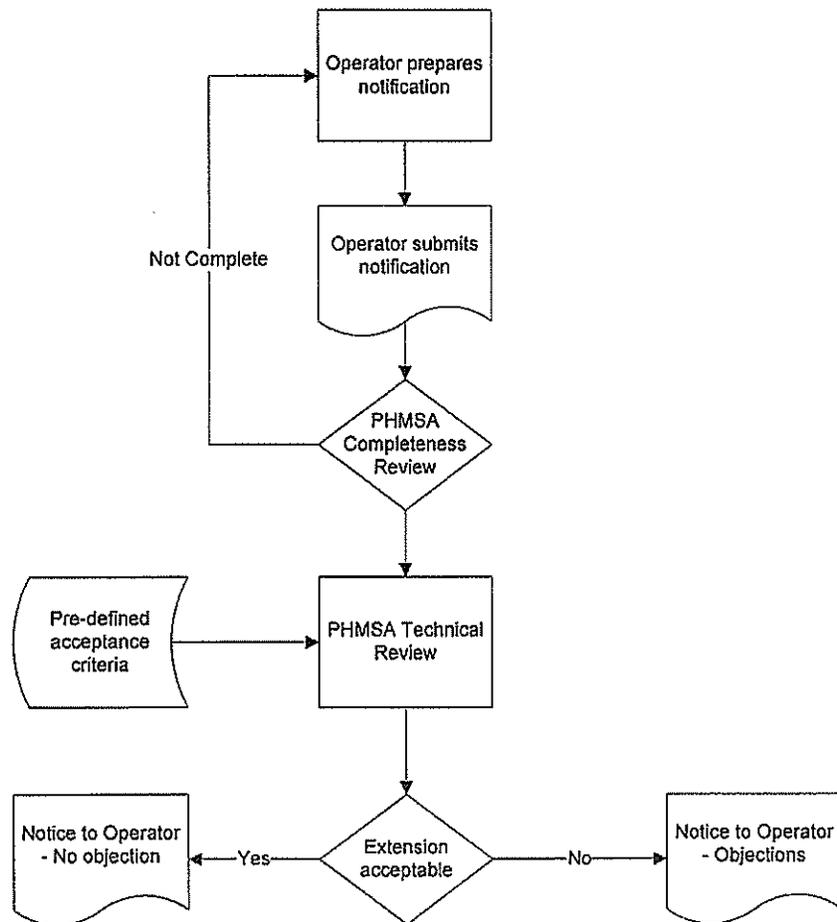
1. If the pipeline operates at pressures that are greater than or equal to 30 percent of SMYS, it must have been assessed using in-line inspection (ILI) with a high resolution magnetic flux leakage (MFL) tool or subpart J pressure test.
2. Most recent ILI assessment shows pipeline to be in good condition. Few conditions meeting immediate repair criteria were found and the causative corrosion mechanisms have been identified and addressed.
3. Most recent subpart J pressure test meets IM requirements and resulted in few leaks/failures or pressure reversals.
4. Few or no significant corrosion repairs have been made in the covered segment since the last integrity assessment.
5. Causes of previously identified significant corrosion defects have been corrected.
6. No history of selective seam corrosion or microbiologically induced corrosion.
7. Pipeline transports tariff quality dry gas, with limited upsets introducing electrolyte or other contaminants, in which case internal corrosion risk has been managed.
8. Pipeline is coated and cathodically protected (CP). Coating must meet 49 C.F.R. § 192.461 and be in good condition. CP must be demonstrated generally effective.
9. No history of stress corrosion cracking.
10. Assumed corrosion growth rate is justified and supports the longer reassessment interval. Calculations of remaining life are conservative and demonstrate safety for an extended interval.
11. Few safety related conditions, leaks, incidents, or failures have resulted from corrosion, and the causes have been addressed.
12. History of compliance with corrosion control, integrity management, operator qualification, and drug & alcohol testing regulations is good.
13. Public awareness program meets 49 C.F.R. § 192.616.
14. No open corrective action orders or significant enforcement actions related to corrosion control program deficiencies affecting the involved pipeline segments.
15. Pipeline must have been constructed after 1970 unless demonstration of good condition is provided.
16. Environmental conditions in which the affected pipeline segment is located must not be unusually conducive to corrosion.

PHMSA would develop additional detailed guidance concerning the information necessary to demonstrate conformance with the criteria. This guidance would be described in the rulemaking notice and made available to operators on the PHMSA web site. Operators would need to demonstrate that their pipeline segments meet each

criterion or provide substantial justification that any failure to meet a criterion does not increase the risk of corrosion in the segment.

The approach PHMSA intends to take for reviewing these notifications is depicted in the following flow chart.

Reassessment Interval Extension Process (Statutory Requirement Amended)



PHMSA will review all notifications it receives and assess whether the criteria in the rule have been met. PHMSA will also consider in its review the specific location of the pipeline segments, the potential consequences if an accident were to occur at that location, and the compliance and overall performance history of the operator. PHMSA would likely not consider an extended reassessment interval if:

- There are significant open enforcement actions against the operator involving its integrity management or corrosion control programs and affecting the identified segments,
- All defects identified by the baseline assessment as requiring remediation have not been addressed, and
- The baseline assessment was conducted by methods other than in-line inspection or pressure testing (except for pipelines operating below 30 percent SMYS, where failure would likely occur as a leak rather than a rupture).

PHMSA or a state agency will perform a completeness review upon receiving a notification to determine that all criteria have been addressed. If the criteria have not been completely addressed, PHMSA (or the State) will inform the operator.

If the notification is found to be complete, PHMSA or a state agency will conduct a detailed technical review against the acceptance criteria. Upon completing that review, PHMSA or the state will make a determination whether an extension is justified. If PHMSA or the state determines that an extended interval is not justified, then PHMSA or the state will inform the operator that it may not extend the assessment interval. In the

event of a favorable determination, PHMSA or the state will inform the operator that it may extend assessments on the specific pipeline segment(s) covered by its notification.

As part of our annual evaluation of State Programs, PHMSA will review State notification processes and the bases on which States determine whether an extension is justified.

PHMSA's revision to its regulation will require each operator to take the following actions in the event that a gas leak or failure occurs on a covered pipeline segment that is operating with an extended reassessment interval:

- Determine the cause of the leak or failure,
- Repair the leak/failure,
- Analyze the failure cause to ascertain what corrections need to be made in the analysis and/or assumptions supporting the selection of reassessment intervals,
- Incorporate lessons learned to re-evaluate reassessment intervals for other pipeline segments, especially those that exceed seven years, and
- Immediately conduct an integrity assessment of the segment that leaked or failed.

PHMSA will post information concerning all notifications that it receives on its IM web site, available to all members of the interested public. For each notification, PHMSA will list the operator, the location(s) of the pipeline segments for which an extended interval is proposed, and the status of PHMSA's review (i.e., Under Review, No objections, or

Objections noted). In cases where PHMSA objects to an operator's notification, we will also post a brief description of the basis for our objections.

PHMSA and its State partners will continue oversight of operator IM programs, as described above, even if reassessment intervals are extended. PHMSA and States will not hesitate to use our regulatory authority to require an operator to conduct assessments when needed, including returning to intervals of seven years (or less, if required), if our inspections identify any issues that raise a safety concern associated with an extended reassessment interval.

Scenario 2: If Statutory Requirement is not Amended: PHMSA's Proposed Approach to Extending Reassessment Intervals by Special Permit

If the current statutory requirement is not amended, PHMSA can provide pipeline operators relief from the requirement to perform seven-year assessments only by waiving compliance with that requirement on a case-by-case basis. PHMSA would do this by issuing special permits to operators who meet applicable guidelines.

Application of General Waiver Authority to Seven-Year Reassessment Requirement

Under 49 U.S.C. § 60118(c), PHMSA has general authority to waive regulatory requirements on terms we consider appropriate if PHMSA determines that the waiver "is not inconsistent with pipeline safety." PHMSA now uses the term "special permits" to

better reflect the limited and conditional nature of these agency actions, and issues special permits on a case-by-case basis.

PHMSA publishes advance notice in the *Federal Register* of its intent to consider a special permit application, invites written comments on the proposal, and establishes a public docket for submission of all comments. PHMSA also notifies the state pipeline safety program manager or other appropriate authority in each affected state. We address all public comments in our decisions granting or denying special permits and publish all special permits on the PHMSA website.

In addition, PHMSA can revoke, suspend, or modify a special permit at any time if it discovers material errors or omissions, or if the holder fails to comply with any term or condition of the special permit.

Under 49 U.S.C. § 60109(c)(5), PHMSA also has additional specific authority to waive the seven-year maximum reassessment interval as follows:

(5) Waivers and modifications.--In accordance with section 60118(c), the Secretary may waive or modify any requirement for reassessment of a facility under paragraph (3)(B) for reasons that may include the need to maintain local product supply or the lack of internal inspection devices if the Secretary determines that such waiver is not inconsistent with pipeline safety.

Reassessment intervals are required to be established that reflect the risks of each segment. PHMSA intends to exercise its authority to issue special permits waiving the seven-year requirement to the extent consistent with achieving our safety objectives.

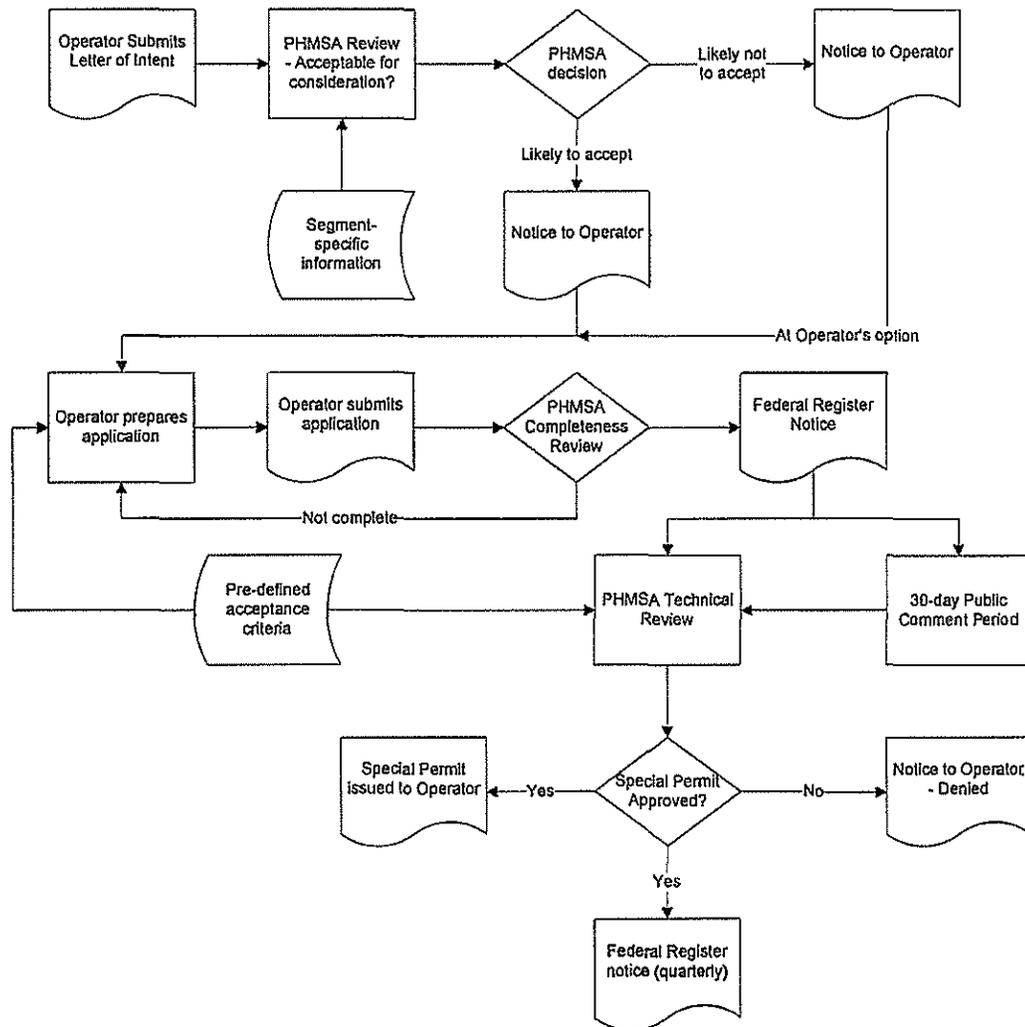
Special Permit Process

In issuing such waivers, PHMSA will require operators to demonstrate they satisfy an established set of criteria as proposed in this document.

PHMSA would screen permit requests for likely acceptability and inform operators if the specific pipeline segment is a likely candidate for special permit. This step is intended to allow PHMSA to identify and eliminate cases in which a special permit would likely not be approved before the notice and comment process begins and will aid the industry in avoiding the resource burdens associated with developing full application materials for pipeline segments that are unlikely candidates for approval.

The process is depicted in the following flow chart.

Reassessment Interval Extension Review Process (Statutory Requirement Not Amended)



Operators would submit a Letter of Intent informing PHMSA of their plans to apply for a special permit to extend a reassessment interval beyond seven years. These letters would contain basic information about the pipeline segment(s) for which a special permit would be sought, including:

- Location(s) of the pipeline segments for which a deviation is sought,

- Date when the baseline assessment was completed, and what method was used,
- Whether all defects identified in the baseline assessment as requiring remediation have been addressed, and
- A certification that a risk-based reassessment interval has been determined in conformance with the requirements of the rule.

PHMSA will review these letters to reach a conclusion as to whether it would be likely to approve a request for a special permit for those pipeline segment(s). PHMSA will consider in this review the specific location of the pipeline segments, the potential consequences if an accident were to occur at that location, and the compliance and overall performance history of the operator. PHMSA would likely not approve a special permit if:

- There are significant open enforcement actions against the operator involving its IM or corrosion control programs and affecting the identified segments,
- All defects identified by the baseline assessment as requiring remediation have not been addressed, and
- The baseline assessment was conducted by methods other than in-line inspection or pressure testing (except for pipelines operating below 30 percent SMYS, where failure would likely occur as a leak rather than a rupture).

PHMSA will inform the operator of the results of its preliminary review, either that it is likely to approve or unlikely to approve a request for a special permit.

If PHMSA is likely to approve a pipeline operator's request for a special permit, the operator would then develop its full special permit application. Operators may request a special permit, at their option, even if PHMSA has indicated it is likely not to approve one (e.g., if the operator believes that it can provide additional information that would overcome any initial PHMSA objections).

PHMSA will review all special permit applications received and make individualized determinations of approval or denial on a case-by-case basis. In order to facilitate consistency and efficiency in conducting the reviews, PHMSA would use the same criteria for these reviews as it would under the option described above (see Table 1 above). PHMSA would publish these criteria as guidelines in the *Federal Register* and maintain them on its IM web site for pipeline operators' reference. Operator requests for special permits would need to address each of the technical factors covered by the guidelines. Operators would need to demonstrate that their pipeline segments meet the guidelines or provide the additional justification which will be described in the guidelines document.

As with the option described above, PHMSA will perform a completeness review upon receiving an application to determine that all guidelines have been addressed. If they have not, PHMSA will inform the operator that it will not consider its request until all guidelines are covered.

PHMSA will publish notice in the *Federal Register* that it is considering issuance of a special permit to allow the operator to extend the reassessment interval (multiple requests may be discussed in a single *Federal Register* notice). PHMSA will establish a docket, and the public will be able to view all documents related to a specific application through internet access to the docket file. A period of 30 days will be allowed for public comment, during which time PHMSA will also perform its technical review of the operator's submission.

Upon completion of its technical review, and consideration of any public comments, PHMSA will make a determination as to whether a special permit should be granted. If it determines not to issue a special permit, the operator will be informed that its request has been denied. In the event of a favorable determination, PHMSA will issue to the operator a written special permit authorizing it to forego conduct of seven-year assessments on the specific pipeline segment(s) covered by its special permit application and establishing any special conditions or requirements that may be appropriate. All special permits are expected to include conditions requiring the following actions in the event that a gas leak or failure occurs on the segments covered by the special permit that is attributed to corrosion:

- Determine the cause of the leak or failure,
- Repair the leak/failure,
- Analyze the failure cause to ascertain what corrections need to be made in the analysis and/or assumptions supporting the selection of reassessment intervals,

- Incorporate lessons learned to re-evaluate reassessment intervals for other pipeline segments, especially those that exceed seven years, and
- Immediately conduct an integrity assessment of the segment that leaked or failed.

Other conditions of the special permit will require operators to update the application annually to: update all information previously submitted (including, but not limited to, identification of HCAs removed or added, including reasons), submit required information for each new covered segment proposed to be added, report the next planned assessment for each segment, and submit the results of assessments completed in the previous year.

PHMSA will review the operator's processes for justifying any special permits during future IM inspections. PHMSA will publish a quarterly notice in the *Federal Register* listing special permits that have been granted.

States use their own procedures for reviewing and approving waiver requests. States are required by statute, however, to notify PHMSA of their intention to issue waivers and may not waive compliance if PHMSA objects⁵. PHMSA will encourage our State partners to utilize the same criteria for reviewing requests to extend reassessment intervals and will use its review opportunity to assure that waivers issued by States are consistent with those that PHMSA itself may issue.

⁵ 49 U.S.C. § 60118(d)

PHMSA and its State partners will continue oversight of operator IM programs, as described above. As part of that oversight, we will also assure that operators comply with the conditions included in their special permits. In accordance with 49 C.F.R. § 190.341(h) (effective April 28, 2008), PHMSA will revoke a special permit if it finds that the operator's IM program and analyses do not continue to provide a sufficient basis for assuring that pipeline safety is maintained by operation under the special permit, or if conditions in the permit are not met.