

tool run or completion of a hydrostatic test, is considered the end of an assessment. RSPA/OPS will issue similar guidance for this rule.

Pressure Testing. We received comments on the proposal to allow pressure testing as an assessment method and that to address manufacturing and construction defects, a pressure test be conducted at least once in the life of the segment.

NTSB noted that although defining HCAs can help to set priorities, risk management programs should ensure that pipelines are appropriately tested at all locations where there is public exposure and cited Carlsbad as an example. Advanced Technology Corporation asserted that there are other fracture mechanics assessment methods which would be preferable to pressure testing, which can cause crack growth.

The majority of comments centered on the proposal to pressure test all segments once in the life of the pipeline. INGAA asserted, with numerous commenters echoing INGAA's comments, that experience has shown manufacturing and construction threats to be stable unless activated through a change in operations or the environment. The Association of Texas Intrastate Natural Gas Pipelines commented that once-in-a-lifetime pressure testing should be eliminated and that testing conducted upon installation (post 1971) or based upon historical operation, provides adequate evidence of safety. Several commenters, including INGAA, suggested that the rule should be aligned with ASME/ANSI B31.8S.

Response: Pressure testing has long been considered the definitive method of testing pipeline integrity. RSPA/OPS has received no information that would challenge this historical practice, and pressure testing remains an acceptable assessment method in the final rule. RSPA/OPS has been convinced by the public comments, including discussions at the public meetings, that it is not necessary to require a once-in-a-lifetime pressure test to address the threat of material and construction defects. Historical safe operation, which in many cases involves several decades, provides confidence that latent defects will not result in pipeline failure as long as operating conditions remain unchanged. The final rule requires that an assessment be performed if operating pressure is increased above the historic level or if operating conditions change in a manner that would promote cyclic fatigue.

Direct Assessment. There were numerous comments about the proposed requirements for using Direct

Assessment (DA). In the proposed rule, direct assessment was allowed to address the threats of external corrosion, internal corrosion or stress corrosion cracking, and then only if certain preconditions were met. The proposed assessment intervals using this method were shorter than the ones proposed using the other assessment methods.

In the NPRM, RSPA/OPS also requested comments on:

- Whether it should allow an operator using Direct Assessment on a pipeline operating at less than 30% SMYS a maximum ten-year reassessment interval regardless of whether the operator excavates and remediates all anomalies on that pipeline, or at least remediates the highest risk anomalies. (68 FR 4278, 4281)

- Whether the benefits of the proposed requirements for External Corrosion Direct Assessment, which were more extensive than the NACE Recommended Practices under development, were worth the cost. (68 FR 4278, 4282)

Several commenters expressed serious concerns. Carol Parker commented that the method needs further study before being approved and Cook Inlet Keeper maintained that more stringent criteria are needed as compared to other assessment methods. Accufacts supported the proposed shorter assessment period for DA because it is a developing and unproven technology and further asserted that the related ICDA approaches are seriously deficient.

In contrast, at least 125 comments, primarily from the pipeline industry, supported the use of Direct Assessment. For example, Northeast Gas Association supported using DA in the integrity management process because its research had showed that DA has a high degree of reliability. Numerous commenters asked that we incorporate the new NACE DA standard into the rule rather than duplicate the requirements. Most of the same commenters argued that DA should be considered equal to inline inspections and hydrostatic tests as an assessment method. Laclede Gas, along with other operators, asserted that DA is the only practical option for many local distribution companies and is better than inline inspection at finding coating damage that has not yet resulted in corrosion with wall loss. Other commenters maintained that DA should be explicitly identified as a technique for detecting potential third-party damage, and that the proposed treatment of DA is so prescriptive as to effectively eliminate it as an option.

Commenters, including Southwest Gas, Paiute, Peoples Energy, PG&E, Kansas Gas Service, and Puget Sound commented that the proposed additional requirements were unnecessary, and were not beneficial. More than 20 commenters recommended incorporating by reference the NACE DA standard.

Nine commenters agreed with the proposal to allow low-stress pipelines a ten-year reassessment interval. Over 30 commenters maintained that DA should be allowed the same schedules as those for inline inspections and hydrostatic tests. Other commenters, such as Sempra and the Iowa Utilities Board, supported less stringent rules for pipelines operating below 30% SMYS because of the lesser hazard posed by failure of such pipelines.

Response: The process of Direct Assessment for evaluating the integrity of pipelines is new. Therefore, the proposed rule included restrictions on use of DA, including shorter baseline and reassessment intervals, because of concerns about the efficacy of the process. The NACE DA standard was still being developed when the proposed rule was issued.

Although the process is new, the techniques involved in DA are not new. There are no new and untested technologies involved. Pipeline operators have used indirect examination tools in DA for many years, and there is a wealth of experience. Although exposing a pipeline for direct observation and evaluation of potential problems is the most reliable means of understanding pipeline condition, it is not practical to excavate and examine entire pipelines. The DA process is a method that involves structured use of the time-tested indirect examination tools, and integration of the information gained from use of those tools with other information about the pipeline, to determine where it is necessary to excavate and examine the pipe.

A group of operators coordinated by Battelle and Gas Technology Institute, and co-funded by RSPA/OPS, conducted and documented additional research and validation of direct assessment after the proposed rule was published. RSPA/OPS personnel reviewed the results of this research, recognized the importance of careful inspections to ensure effective application of direct assessment, and recommended focused training of RSPA/OPS inspectors in the characteristics of an effective DA program. In addition, RSPA/OPS has included qualification requirements in the final rule for individuals that carry