

out DA for those that interpret the results.

Early results from the research have underlined the importance of operator vigilance in applying DA and of continuous incorporation of lessons learned in implementation procedures. The results of this research were discussed at the public meetings held during the comment period. These efforts have significantly improved RSPA/OPS's confidence in this method for assessing pipelines. RSPA/OPS has additionally been persuaded that many distribution companies operating transmission pipelines will need to rely heavily on this method. These companies' transmission pipelines are closely integrated with their distribution systems, are generally not amenable to inline inspection, and are often impractical to remove from service for pressure testing. Most also operate at low pressures, presenting relatively smaller risks than other transmission pipelines. Placing more restrictive requirements on use of DA would increase the burden, and costs, for operators of these low-risk pipelines without commensurate benefits.

For all of these reasons, RSPA/OPS has concluded that it is unnecessary to place significant restrictions on the use of direct assessment. The final rule has been revised to make the required baseline and reassessment periods the same for DA as for other assessment methods. Conditions on the use of DA as a primary assessment method have been eliminated. These changes have rendered moot the question of whether a ten-year reassessment interval should be allowed for low-pressure pipelines even if all anomalies are not excavated.

In the proposed section on using direct assessment to address external corrosion, we had drawn from a draft of the NACE standard on external corrosion that was close to completion. Since the proposed rule was published, NACE issued its recommended practice on external corrosion direct assessment (NACE Recommended Practice RP-0502-2002). RSPA/OPS has reviewed the recommended practice and concluded it has all the necessary requirements and safeguards to ensure the efficacy of the process.

The NACE ECDA recommended practice (RP) has been incorporated into the final rule in the section addressing requirements for external corrosion direct assessment. The existence of NACE RP has allowed us to eliminate constraints on use of DA that were the subject of the questions in the preamble. Incorporating the standard is responsive to public comments, contributes to simplifying the rule, and is consistent

with our overall practice of referencing consensus standards where they are available and meet regulatory needs. In addition, the rule specifies requirements beyond those in the NACE RP. Requirements in the rule that go beyond the NACE recommended practice address documentation criteria used in making decisions in implementing direct assessment. This documentation is needed to support oversight by RSPA/OPS and state pipeline safety authorities.

NACE has not completed development of recommended practices for internal corrosion and stress corrosion cracking. The final rule references requirements in ASME/ANSI B31.8S applicable to these methods and includes additional requirements. RSPA/OPS will consider incorporating NACE standards for these techniques when those standards have been completed.

*Confirmatory Direct Assessment (CDA).* The NPRM proposed allowing an operator to use Confirmatory Direct Assessment (CDA) as an assessment method at seven-year intervals if the operator established a longer reassessment interval using one of the other assessment methods. CDA is a more focused application of DA to address known threats in a pipeline segment.

Industry generally embraced the concept of CDA. Dominion recommended allowing CDA as the first reassessment following a baseline assessment conducted after December 17, 2002. Houston Pipeline maintained that CDA should also be available for use on all pipelines previously assessed, not just those assessed using pressure testing or inline inspection. Sempra supported the use of CDA and suggested utilizing Section 5.10 of NACE RP0502 to determine the number and locations of excavations and direct examinations to be made if ECDA was used for the previous assessment.

Although Northeast Gas Association supported the CDA concept, it suggested basing the CDA process on a technical industry standard, and streamlining the process so that only one dig in each segment is required as per the NACE standard instead of the proposed two digs. Peoples North Shore Gas stated that the proposed process only provides minimal relief as compared to full DA, echoed the need for streamlining, and provided several streamlining suggestions.

Opposing the use of CDA, Cook Inlet Keeper maintained that CDA is not as effective as internal inspection or pressure testing. Cook Inlet suggested OPS compare the results for pipelines

using CDA for reassessment to the results for pipelines using internal inspection or pressure testing for reassessment, and should CDA prove less effective than the latter two methods, reevaluate allowing its use.

*Response:* CDA is a more focused version of Direct Assessment. The additional research and validation conducted in a project managed by the Gas Technology Institute, carried out by several operators working with Battelle, and funded by RSPA/OPS and the industry has increased RSPA/OPS's confidence in DA (as described above), as well as our confidence in CDA. The research had overview and partial funding by RSPA/OPS. It included comparison of results from various above-ground assessment tools with internal inspection runs completed on the same segments. The results are compelling enough to allow RSPA/OPS to support use of the technology under very careful oversight and with the assumption of continuing development and validation. The final rule requires that the baseline assessment on all covered segments must be by internal inspection, pressure testing, Direct Assessment, or other equivalent technology (with prior notice to RSPA/OPS) and that the reassessment must be by one of these methods at intervals specified in the rule and in ASME/ANSI B31.8S. CDA is an interim assessment technique designed for use when the reassessment interval by one of these methods exceeds seven years.

The rule provides that CDA for external corrosion can be conducted using only one indirect measurement tool, rather than two complementary tools as required for Direct Assessment. The rule also provides for a more limited number of excavations, requiring excavation of only one scheduled indication in each ECDA region. Any "immediate indications" that are identified must also be excavated. The final rule also provides that additional assessment, using one of the other methods, must be performed if the CDA results do not confirm the integrity of the pipeline.

*Internal Corrosion Direct Assessment (ICDA).* The NPRM proposed requirements for the use of Direct Assessment to address internal corrosion in a pipeline segment.

Numerous commenters noted problems with the proposed ICDA language used in some of the requirements. Suggestions included: Rewording to clarify that internal corrosion can result from more than upset conditions, deleting references to chlorides, replacing "moisture" with "electrolytes," replacing "MIC" with