U.S. Nuclear Regulatory Commission Public Meeting Summary

February 7, 2020

Title: Public Meeting with Industry and Members of the Public to Discuss Inspection Procedure 71111.21N.02, "Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements"

Date of Meeting: Thursday, January 9, 2020

Location: NRC Region IV Office, Conference Room 1 - CR- 1062, 1600 East Lamar Boulevard Arlington, TX

Type of Meeting: Category 3

Purpose of the Meeting(s):

To discuss the implementation of Inspection Procedure 71111.21N.02 to assess the reliability, functional capability, and design basis of risk-important power-operated valves (POVs) as required by 10 CFR 50.55a and applicable 10 CFR Part 50, Appendix A and Appendix B, requirements. POVs include, for example, motor-operated valves (MOVs), air-operated valves (AOVs), hydraulic-operated valves (HOVs), solenoid-operated valves (SOVs), and pyrotechnic-operated (squib) valves.

General Details:

The U.S. Nuclear Regulatory Commission (NRC) conducted a public meeting beginning at 1:00 p.m. central time (CT) where members of the public and industry met with NRC staff and asked questions related to the implementation of Inspection Procedure (IP) 71111.21N.02, "Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements." Twelve NRC staff members were present. The meeting was facilitated by NRC staff members Douglas Bollock and Kenneth Kolaczyk. The meeting began with an introduction of the NRC staff and a review of the meeting ground rules, followed by a 45-minute presentation. The presentation discussed why the agency was focusing inspection efforts on POVs, IP 71111.21N.02 requirements and guidance, and lessons learned from the environmental qualification (EQ) inspections completed under IP 71111.21N, "Design Bases Assurance Inspection (Programs)." The majority of the meeting involved answering questions concerning these topics. Approximately 30 people participated in the meeting, either in-person or via teleconference.

Summary of Presentations:

The NRC staff discussed the reasons behind why the NRC is inspecting POVs. The primary reasons given were: Relatively few efforts in current baseline inspection, on verifying implementation of verifying POVs meet their design requirements as discussed in Generic Letter 96-05; Operating experience indicates gaps still exist regarding MOV/POV performance; and that POVs are important to the proper functioning of risk significant components, and the potential for their failure could impact multiple systems.

The staff also discussed the POV Inspection Procedure Requirements and Guidance. This discussion included pre-inspection activity, the information the inspectors will request that the licensee make available, and the information the inspectors will consider for their sample selection to complete the inspection. The NRC staff also discussed the flow of the inspection process.
The NRC staff discussed potential areas of concern for POVs, such as low margin, misapplication of industry data and methodology and using static testing as a basis for monitoring valve degradation with no further engineering analysis or data.
The NRC staff also discussed an overview of lessoned learned from implementation of the EQ inspections. The NRC incorporated the lessons learned in development of the POV inspection procedure and are taking what was learned to enhance the POV inspection implementation. Specifically, the NRC staff has: Identified singular technical and programmatic points-of-contact within the NRC for POV inspections; developed minor/more-than-minor examples specific to the POV inspection; developed enhanced training for inspectors focusing on both technical and inspection implementation areas; developed an enhanced Interactive SharePoint Site developed for NRC inspectors and staff; performed Tabletop dry runs of potential POV inspection issues; and proactively established a findings review panel.
The NRC staff then shared some frequently asked questions (FAQs) and answers. The presentation and FAQs can be found at ADAMS Accession Number ML20003F667.

At the end of the presentation, the staff discussed two hypothetical examples where a licensee failed to include specific valves in an MOV program that was implemented to satisfy 10 CFR 50.55a(b)(3)(ii). The discussion at the public meeting concluded that this hypothetical scenario involved a performance deficiency by the licensee with the decision regarding whether the deficiency constituted a minor or more-than minor issue to depend on the results of the evaluation of the specific MOVs.

As a lesson learned from the EQ inspections, the staff plans to coordinate the IP 71111.21N.02 inspections throughout the regions to provide consistency in conducting the inspections and in evaluating the inspection findings. The staff is also conducting POV training for inspectors to discuss POV performance and specific guidance in IP 71111.21N.02. In addition, the staff conducted a three-day intensive course on MOV design, performance, and operation, including diagnostic traces, for inspectors and engineers in each Region and Headquarters. The staff will consider periodic public meetings to discuss generic results from the IP 71111.21N.02 inspections.

Public Participation Themes:

During the public question and answer session of the meeting, the NRC staff addressed questions on the following topics:

- NRC guidance and regulations pertaining to POVs (e.g., MOVs, AOVs, SOVs, HOVs, and squib valves)
- Documentation requests for inspection preparation
- Inspection scope
- Training of NRC staff conducting the inspections

A sample of comments and concerns involving the scope of the environmental review made during the public comment portion of the meeting included:

1. **What kind of data is the NRC looking for in preparation of the inspection?**

   The data the NRC is looking for is contained in 71111.21N.02, Attachment C, "Power-Operated Valve Inspection Capability Information." If the information requested is not tracked or readily available, the licensee should provide as much information as possible and leave the specific data request that is not available unfilled. Since some data requests may be site specific (e.g., available valve factor), the licensee may provide comments for how the data is determined.

Action Items/Next Steps:

- The staff will implement POV inspections over the current inspection cycle from 2020 through 2022. The staff will then determine whether POV inspections will continue over the long term based on the results of the IP 71111.21N.02 inspections.

Attachments:

- Meeting agenda - ML20007E696
- NRC staff presentation - ML20003F667
- POV scenarios - ML20003F740