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MEMORANDUM TO: Dennis C. Morey, Chief
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Division of Licensing Projects
Office of Nuclear Reactor Regulation

FROM: Joseph J. Holonich, Senior Project Manager */RA/*
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SUBJECT: SUMMARY OF JULY 12, 2018, MEETING TO DISCUSS DIGITAL
INSTRUMENTATION AND CONTROL INTEGRATED ACTION PLAN,
MODERNIZATION PLAN #3

On July 12, 2018, U.S. Nuclear Regulatory Commission (NRC) staff held a Category 2 meeting with representatives from the Nuclear Energy Institute (NEI). The purpose of the meeting was to discuss the digital instrumentation and control (I&C), Integrated Action Plan (IAP), Modernization Plan #3 (MP #3), "Acceptance of Digital Equipment." A copy of the current IAP can be found in the Agency wide Documents Access and Management System (ADAMS) package Accession No. ML18016B023. All other information related to the meeting and discussed in this summary can be found in the ADAMS package Accession No. ML18122A134.

The meeting began with a discussion of the goals and objectives of MP #3. NEI provided a copy of "Scope Summary for Modernization Plan 3 (MP3) 'Acceptance of Digital Equipment' Addressing 3rd Party Certification of Characteristics for Commercial Grade Digital Equipment." A copy of this document is available in the meeting package.

In the document, NEI identified three desired outcomes. It was agreed that in the IAP revision being prepared by the NRC staff, the outcomes listed in the NEI document would be considered for inclusion in the objectives and scope of the IAP revision currently being prepared. This was an action from the meeting.

Additional presentations made at the meeting included ongoing research at the Electric Power Research Institute (EPRI), the NRC staff inspection criteria, the applicability of the EPRI research to the NRC staff assessment, and the schedule for the MP #3 activities. During these presentations, there were a number of questions raised, and there were some answers that required further clarifications, as described below.

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One area of detailed discussion was whether the NEI 17-06, "Acceptance of Commercial Grade Digital Equipment for Safety Applications Certified to a Particular SIL [Safety Integrity Level]," which will document the results of the EPRI research, could be used to obviate the need for the NRC staff to conduct audits and internal observations of implementation of the SIL certification process. This process is a part of the evaluations for acceptability of EPRI TR 106439, "Guideline on Evaluation and Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Applications," dependability critical characteristics in commercial grade dedication (CGD) of digital equipment. The NRC staff stated that this was a new proposal and that the staff would have to have a better understanding of how the EPRI research would be used in dedicating SIL certified commercial digital equipment.

The NRC staff clarified that it needed to ensure that the technical aspects and implementation of any CGD were acceptable. Further, the NRC staff stated that its focus was on ensuring there were fixed processes in place and those processes were consistently implemented. Having a SIL certificate must ensure that a known and repeatable process was followed during the certification process. Audits and observations of these implementations would be used to help the NRC staff gain confidence in the SIL certification process and its use in the CGD activities.

NEI stated that it was looking for ways to make the process for CGD more efficient. NEI stated that the development and evaluation of NEI 14-05, Revision 1, "Guidelines for the Use of Accreditation in Lieu of Commercial Grade Surveys for Procurement of Laboratory Calibration and Test Services," took years. The NRC staff clarified the actual staff evaluation of the process described in NEI 14-05 took only one and one half year. Information on NEI 14-05 can be found in ADAMS Package No.: ML14245A389.

Also, NEI stated that it was looking to move forward with a process that would put digital I&C in plants. NEI noted that digital I&C was not in plants and that was a safety concern. Without a process that makes digital I&C implementable, it was impossible to upgrade current I&C systems.

As a result of the discussions, NEI committed to look at its proposal for using the EPRI research to justify eliminating the need for NRC staff audits and observations of implementation. This was an action from the meeting.

After the detailed discussions, the NRC staff and NEI discussed the schedule provided by NEI. A copy of the schedule is included in the meeting package referenced earlier. NEI stated that based on the discussions at the meeting, it needed to revise the schedule for providing NEI 17-06. This was an action from the meeting.

In the closing remarks, NEI stated that the meeting was highly productive in better understanding what the NRC staff expectations were for MP #3 activities. Further, NEI said that the exchanges would be helpful in providing a high-quality submittal.

The NRC staff stated in its closing remarks that using a third-party certificate was a modernization of the NRC process. Continuing, the NRC staff said that it was open and receptive to this new process. However, the NRC staff had to make sure that any process maintained safety. Other processes beyond those currently in use may be acceptable but the NRC staff needs to understand what the proposed process does.

Actions from the meeting included:

- 1) The NRC staff will consider including the three NEI desired outcomes in the objectives and scope of the IAP revision currently being prepared;
- 2) NEI will prepare a proposal for industry oversight of the SIL certification process leveraging the EPRI research in lieu of NRC staff audits and observations of implementation; and
- 3) NEI will revise the schedule for providing NEI 17-06.

Docket No.: 99902028

SUBJECT: SUMMARY OF JULY 12, 2018, MEETING TO DISCUSS DIGITAL
INSTRUMENTATION AND CONTROL INTEGRATED ACTION PLAN,
MODERNIZATION PLAN #3 DATE: AUGUST 1, 2018

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ADAMS Accession Nos. ML18092A003, Package; ML18193B110, Summary

*concurrence via e-mail

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