



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 23, 2019

MEMORANDUM TO: Dennis Morey, Chief
Licensing Processes Branch
Division of Licensing Projects
Office of Nuclear Reactor Regulation

FROM: Paul Kallan, Project Manager /RA/
Licensing Processes Branch
Division of Licensing Projects
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE AUGUST 29, 2019, CATEGORY 2, PUBLIC
MEETING AND TELECONFERENCE TO DISCUSS THE POTENTIAL
REGULATORY GUIDANCE ENDORSING INTERNATIONAL
ELECTROTECHNICAL COMMISSION STANDARDS FOR
SOFTWARE DEVELOPMENT

The U.S. Nuclear Regulatory Commission (NRC) held a Category 2 public meeting and teleconference on August 29th, 2019, with the Nuclear Energy Institute (NEI) and other industry stakeholders, to discuss the potential regulatory guidance endorsing International Electrotechnical Commission (IEC) standards for software development. No members of the general public participated via the Bridgeline during the meeting.

The public meeting notice dated July 29th, 2019, can be found in the NRC's Agencywide Documents Access and Management Systems (ADAMS) under Accession No. ML19210C016. This meeting notice was also posted on the NRC public website.

Enclosed is the meeting agenda (Enclosure 1), list of participants (Enclosures 2), and an overview of the meeting (Enclosure 3). The staff presentations at the meeting can be found at the ADAMS Accession Nos. given below:

- IEC Endorsement Project: Review of Goals and General Philosophy ML19240A901
- Description of Preliminary Staff Evaluation for Use of IEC 60880 and IEC 61513 for Software Development ML19233A215

Docket No. XXX

Enclosures:

1. Meeting Agenda
2. List of Attendees
3. Meeting Overview

CONTACT: Paul Kallan, NRR/DLP
301-415-2809

SUBJECT: SUMMARY OF THE AUGUST 29, 2019, CATEGORY 2, PUBLIC MEETING AND
TELECONFERENCE TO DISCUSS THE POTENTIAL REGULATORY GUIDANCE
ENDORISING INTERNATIONAL ELECTROTECHNICAL COMMISSION
STANDARDS FOR SOFTWARE DEVELOPMENT REPORT
DATE: OCTOBER 23, 2019.

DISTRIBUTION:

PUBLIC	SArndt, NRR	RidsNroDlse
DLP R/F	PKallan, NRR	RidsOgcMailCenter
EBenner, NRR	DZhang, NRR	RidsAcrcMailCenter
BWittick, NRR	PRebstock, NRR	
DMorey, NRR	RStattel, NRR	

ADAMS Accession No.: ML19231B039 *concurred via email NRR-002

OFFICE	DLP/PLPB/PM	DLP/PLPB/BC	DLSE/PLPB/PM
NAME	PKallan	DMorey	PKallan (signed)
DATE	10/22/19	10/23/19	10/23/19

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION
CATEGORY 2 PUBLIC MEETING AND TELECONFERENCE TO DISCUSS
THE POTENTIAL REGULATORY GUIDANCE ENDORSING IEC STANDARDS
FOR SOFTWARE DEVELOPMENT
PUBLIC MEETING AGENDA
August 29TH, 2019

<i>Time</i>	<i>Topic</i>	<i>Speaker</i>
1:00 PM	Introductions	NRC Staff/NEI Staff
1:10 PM	Opening Remarks	NRC Staff/NEI Staff
1:20 PM	Review of Goals of the Project	NRC Staff
2:00 PM	Description of Preliminary Staff Guidance for Use of IEC 60880 and IEC 61513 for Software Development	NRC Staff
3:45 PM	Industry Input on the Goals and Process	NEI/Industry
4:30 PM	Opportunity for Public Comment	Members of the Public
4:45 PM	Closing Remarks	NRC Staff/NEI Staff
5:00 PM	Meeting Adjourn	

U.S. NUCLEAR REGULATORY COMMISSION
CATEGORY 2 PUBLIC MEETING AND TELECONFERENCE TO DISCUSS
THE POTENTIAL REGULATORY GUIDANCE ENDORSING IEC STANDARDS
FOR SOFTWARE DEVELOPMENT

LIST OF ATTENDEES

August 29th, 2019

Name	Organization
Steven Arndt	U.S. Nuclear Regulatory Commission (NRC)
Eric Benner	NRC
Tekia Govan	NRC
Ronaldo Jenkins	NRC
Paul Kallan	NRC
Paul Rebstock	NRC
Nancy Salgado	NRC
Richard Stattel	NRC
Deanna Zhang	NRC
Stephen Geier	Nuclear Energy Institute (NEI)
Stephen Vaugh	NEI
Warren Odess-Gillett	NEI
Jana Bergman	Curtiss Wright
Ray Herb	SNC
Mark Burzynski	Rolls Royce Nuclear
Neil Archambo	Duke Energy
David Herrell	MPR
Pat Jackson	Westinghouse
John Connolly	Exelon
Michael Annon	I&C Engineering Associates
Gordon Cleifton	DOE
Frank Novak	GE Hitachi Nuclear Energy

U.S. NUCLEAR REGULATORY COMMISSION
CATEGORY 2 PUBLIC MEETING AND TELECONFERENCE TO DISCUSS
THE POTENTIAL REGULATORY GUIDANCE ENDORSING IEC STANDARDS
FOR SOFTWARE DEVELOPMENT

On August 29th, 2019, a public meeting and teleconference with NEI and other industry stakeholders was held to discuss the NRC staff's proposed regulatory guidance for the use of IEC standards (IEC 60880 and IEC 61513) as an acceptable way to meet the requirements associated with software development for safety systems used in nuclear power plants. No member of the general public participated via Bridgeline during the meeting.

During the meeting, U.S. Nuclear Regulatory Commission (NRC) staff discussed the project goals to coordinate with industry stakeholders if there was interest in or use for an endorsement of IEC standards as another acceptable way to meet NRC regulations. The NRC staff also discussed the general philosophy of the IEC Endorsement Project where staff would limit the guidance to a specific set of regulatory requirements.

The NRC staff discussed the background where the original plan was to develop guidance that endorses specific IEC standards (e.g., IEC 61513) as an alternative to the IEEE standards incorporated by reference (IBR) in 10 CFR 50.55a(h). However, the NRC staff found that endorsing IEC standards as alternatives to IBR standards may not be useful for operating reactors. The NRC staff discussed their conclusion that software development standards should be the focus for endorsement and whether IEC 60880 could be endorsed as one way to meet regulations related to software development. Another issue was to identify other IEC standards that may needed to be endorsed if gaps within IEC 60880 for a certain topic are identified. The NRC staff also discussed that there were significant differences in the classification of systems in IEC and IEEE nuclear standards that needed to be addressed.

The NRC staff discussed the preliminary evaluation of the software development criteria within IEC 60880 and IEC 61513 to determine if these standards or portions of them can be endorsed as acceptable ways to meet the quality requirements of 10 CFR 50 Appendix B, and the design the requirements incorporated by reference in 10 CFR 50.55a. The current series of RGs endorse IEEE computer society standards for software development. The staff's preliminary evaluation focused on the following topics: verification and validation of software, software configuration management, and software unit testing. At the end of this discussion, NRC staff asked NEI and any licensees in the industry if they would be interested in being part of a working group. NEI mentioned that they would gather feedback from industry regarding the interest of the IEC endorsement project and then provide a response to the NRC by September 20, 2019.

At the end of the meeting, NRC staff opened up the meeting to comments or questions from the general public. There were no comments or questions from the public.