

P577

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Type of Project: Revision to IEEE Standard

PAR Request Date: 24-Jul-2008

PAR Approval Date: 07-Nov-2008

PAR Expiration Date: 31-Dec-2012

Status: PAR for a Revision to an existing IEEE Standard 577-2004

Project Record:

1.1 Project Number: P577

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard Requirements for Reliability Analysis in the Design and Operation of Safety Systems for Nuclear Power Generating Stations

Old Title: IEEE Standard Requirements for Reliability Analysis in the Design and Operation of Safety Systems for Nuclear Facilities

3.1 Working Group: Reliability (PE/NPE/WG_3.3)

Contact Information for Working Group Chair

Name: James Liming

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Contact Information for Working Group Vice-Chair

None

3.2 Sponsoring Society and Committee: IEEE Power & Energy Society/Nuclear Power Engineering (PE/NPE)

Contact Information for Sponsor Chair

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4.1 Type of Ballot: Individual

4.2 Expected Date of Submission for Initial Sponsor Ballot: 03/2009

4.3 Projected Completion Date for Submittal to RevCom: 12/2009

5.1 Approximate number of people expected to work on this project: 15

5.2 Scope: This standard sets forth the minimum acceptable requirements for the performance of reliability analyses for safety systems when used to address the reliability considerations discussed in industry standards and guidelines. The methods of this standard may also be applied to other systems, including the interactions, if any, between safety and non-safety systems. The requirements should be applied during the phases of design, fabrication, testing, maintenance, and repair of systems and components in nuclear power generating stations. The timing of the analysis depends upon the purpose for which the analysis is performed. This standard applies to the facility owner and other organizations responsible for the activities previously stated.

Old Scope: This standard sets forth the minimum acceptable requirements for the performance of reliability analyses for safety-related systems when used to address the reliability considerations discussed in the standards listed in Clause 2.

The methods of this standard may also be applied to other systems, including the interactions, if any, between safety-related and non-safety-related systems. The requirements should be applied during the phases of design, fabrication, testing, maintenance, and repair of systems and components in nuclear facilities. The timing of the analysis depends upon the purpose for which the analysis is performed. This standard applies to the facility owner and other organizations responsible for the activities previously stated.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: The purpose of this standard is to provide uniform, minimum acceptable requirements for the performance of

Old Purpose The purpose of this standard is to provide uniform, minimum acceptable requirements for the performance

reliability analyses for safety systems found in nuclear facilities, but not to define the need for an analysis. The need for reliability analysis has been identified in other standards (e.g., IEEE Std 379, which describes the application of the single-failure criterion). IEEE Std 352 provides guidance in the application and use of reliability techniques referred to in this standard.

of reliability analyses for safety-related systems found in nuclear facilities, but not to define the need for an analysis. The need for reliability analysis has been identified in other standards that expand the requirements (e.g., IEEE Std 379 -2000, 1 which describes the application of the single-failure criterion). IEEE Std 352 -1987 provides guidance in the application and use of reliability techniques referred to in this standard.

5.5 Need for the Project: The objective of this project is to support licensing activities for nuclear facilities and to comply with the IEEE 5-year review plan.

5.6 Stakeholders for the Standard: Nuclear industry worldwide

Intellectual Property

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes

If yes, state date: 21-Jan-2008

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No

7.1 Are there other standards or projects with a similar scope? No

7.2 International Activities

a. Adoption

Is there potential for this standard (in part or in whole) to be adopted by another national, regional or international organization? No

b. Joint Development

Is it the intent to develop this document jointly with another organization? No

c. Harmonization

Are you aware of another organization that may be interested in portions of this document in their standardization development efforts? No

8.1 Additional Explanatory Notes (Item Number and Explanation): The Scope and Purpose of this standard have been revised to be consistent with the current approved standard and to make minor editorial revisions.

5.4: IEEE 352 IEEE Guide for General Principles of Reliability Analysis of Nuclear Power Generating Station Safety Systems

IEEE 379 - IEEE Standard Application of the Single-Failure Criterion to Nuclear Power Generating Station Safety Systems