

DRAFT for Interim Use and Comment

U. S. NUCLEAR REGULATORY COMMISSION

DESIGN-SPECIFIC REVIEW STANDARD FOR mPower™ iPWR DESIGN

Appendix D

References

1. ANSI/ASME NQA-1-1983, Quality Assurance Program Requirements for Nuclear Facilities
2. ANSI/ASME NQA-1a-1983 Addenda, Addenda to ANSI/ASME NQA-1-1983, Quality Assurance Program Requirements for Nuclear Facilities
3. ASME Std. NQA 1-1994, Quality Assurance Requirements for Nuclear Facility Applications
4. EPRI NP-5652, Guideline for the Utilization of Commercial Grade Items in Nuclear Safety-related Applications, June 1988
5. GL 85-06, Quality Assurance Guidance for ATWS Equipment That Is Not Safety-related, April 16, 1986
6. GL 87-12, Loss of Residual Heat Removal (RHR) While the Reactor Coolant System (RCS) is Partially Filled
7. GL 88-17, Loss of Decay Heat Removal
8. GL 88-20, Individual Plant Examination for Severe Accident Vulnerabilities, November 23, 1988
9. GL 89-02, Actions to Improve the Detection of Counterfeit and Fraudulently Marketed Products, 1989
10. GL 91-05, Licensee Commercial Grade Procurement and Dedication Programs, 1991
11. GL 91-04, Guidance on Preparation of a Licensee Amendment Request for Changes in Surveillance Intervals to Accommodate a 24 Month Fuel Cycle, April 2, 1991
12. IEEE Std 100-2000, The Authoritative Dictionary of IEEE Standards Terms 7th Edition
13. IEEE Std 1061-1998, IEEE Standard for a Software Quality Metrics Methodology
14. IEEE Std 12207.0-1996, IEEE/EIA Standard - Industry Implementation of International Standard ISO/IEC 12207:1995 (ISO/IEC 12207), Standard for Information Technology - Software Life Cycle Processes

DRAFT for Interim Use and Comment

15. IEEE Std 1228-1994, IEEE Standard for Software Safety Plans
16. IEEE Std C62.36 2000, IEEE Standard Test Methods for Surge Protectors Used in Low Voltage Data, Communications, and Signaling Circuits
17. IEEE Std. 1008-1987, IEEE Standard for Software Unit Testing
18. IEEE Std. 1012-1998, IEEE Standard for Software Verification and Validation
19. IEEE Std 1023-1988, IEEE Guide for the Application of Human Factors Engineering to Systems, Equipment, and Facilities of Nuclear Power Generating Stations
20. IEEE Std. 1028-1997, IEEE Standard for Software Reviews
21. IEEE Std. 1042-1987, IEEE Standard for Software Reviews, IEEE Guide to Software Configuration Management
22. IEEE Std. 1050-1996, IEEE Guide for Instrumentation and Control Equipment Grounding in Generating Stations
23. IEEE Std. 1074-1995, IEEE Standard for Developing Software Life Cycle Processes
24. IEEE Std. 323-1974, IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations
25. IEEE Std. 338- 1987, Standard Criteria for the Periodic Surveillance Testing of Nuclear Power Generating Station Safety Systems
26. IEEE Std. 379-2000, Standard Application of the Single Failure Criterion to Nuclear Power Generating Station Safety Systems, (R2008)
27. IEEE Std. 384-1992, IEEE Standard Criteria for Independence of Class 1E Equipment and Circuits
28. IEEE Std. 497-2002, IEEE Standard Criteria for Accident Monitoring Instrumentation for Nuclear Power Generating Stations
29. IEEE Std. 610.12-1990, IEEE Standard Glossary of Software Engineering Terminology
30. IEEE Std. 828-1990, IEEE Standard for Software Configuration Management Plans
31. IEEE Std. 829-1983, IEEE Standard for Software Test Documentation
32. IEEE Std. 830-1993, IEEE Recommended Practice for Software Requirements Specifications
33. ISA S67.02-1980, Nuclear Safety-related Instrument Sensing Line Piping and Tubing Standards for Use in Nuclear Power Plants

DRAFT for Interim Use and Comment

34. ISA S67.04 1994, Part II, Methodology for the Determination of Setpoints for Nuclear Safety-related Instrumentation
35. ISA S67.04, Part I-1994, Setpoints for Nuclear Safety-related Instrumentation
36. NRC Inspection Manual, Inspection Procedure 52001, Digital Retrofits Receiving Prior Approval, March 2, 1998
37. NRC Inspection Manual, Inspection Procedure 93807, Systems Based Instrumentation and Control Inspection, 5/94
38. NUREG/CR-5560, Aging of Nuclear Plant Resistance Temperature Detectors, June 1990
39. NUREG/CR-6082, Data Communications, August 1993
40. NUREG/CR-6083, Reviewing Real Time Performance of Nuclear Reactor Safety Systems, August 1993
41. NUREG/CR-6090, The PLC and Its Application in Nuclear Reactor Protection Systems, 1993
42. NUREG/CR-6101, Software Reliability and Safety in Nuclear Reactor Protection Systems, 1993
43. NUREG/CR-6303, Method for Performing Diversity and Defense in Depth Analyses of Reactor Protection Systems, 1994
44. NUREG/CR-6421, A Proposed Acceptance Process for Commercial Off the Shelf (COTS) Software in Reactor Applications, 1996
45. NUREG/CR-6463, Review Guidelines on Software Languages for Use in Nuclear Power Plant Safety Systems, 1996
46. NUREG-0493, A Defense in Depth and Diversity Assessment of the RESAR 414 Integrated Protection System, 1979
47. NUREG-0694, TMI Related Requirements for New Operating Reactor Licenses, 1980
48. NUREG-0711, Human Factors Engineering Program Review Model
49. NUREG-0718, Licensing Requirements for Pending Applications for Construction Permits and Manufacturing License, 1981
50. NUREG-0737, Clarification of TMI Action Plan Requirements, 1982
51. NUREG-0737 Supplement 1, Clarification of TMI Action Plan Requirements - Requirements for Emergency Response Capability, 1983
52. NUREG-0809, Review of Resistance Temperature Detector Time Response Characteristics, August 1981

DRAFT for Interim Use and Comment

53. RG 1.100, Revision 3, Seismic Qualification of Electric Equipment for Nuclear Power Plants, 2009
54. RG 1.105, Revision 3, Setpoints for Safety-related Instrumentation, 1999
55. RG 1.118, Revision 3, Periodic Testing of Electric Power and Protection Systems, 1995
56. RG 1.151, Revision 1, Instrument Sensing Lines, 2010
57. RG 1.152, Revision 3, Criteria for Digital Computers in Safety Systems of Nuclear Power Plants, 2011
58. RG 1.153, Revision 1, Criteria for Safety Systems, 1996
59. RG 1.168, Revision 1, Verification, Validation, Reviews and Audits for Digital Computer Software Used in Safety Systems of Nuclear Power Plants, 2004
60. RG 1.169, Configuration Management Plans for Digital Computer Software Used in Safety Systems of Nuclear Power Plants, 1997
61. RG 1.170, Software Test Documentation for Digital Computer Software Used in Safety Systems of Nuclear Power Plants, 1997
62. RG 1.171, Software Unit Testing for Digital Computer Software Used in Safety Systems of Nuclear Power Plants, 1997
63. RG 1.172, Software Requirements Specifications for Digital Computer Software Used in Safety Systems of Nuclear Power Plants, 1997
64. RG 1.173, Developing Software Life Cycle Processes for Digital Computer Software Used in Safety Systems of Nuclear Power Plants, 1997
65. RG 1.174, Revision 2, An Approach for Use Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis, 2011
66. RG 1.180, Revision 1, Guidelines for Evaluating Electromagnetic and Radio Frequency Interference in Safety-related Instrumentation and Control Systems, 2003
67. RG 1.189, Revision 2, Fire Protection for Operating Nuclear Power Plants, 2009
68. RG 1.204, Guidelines for Lightning Protection of Nuclear Power Plants, 2005
69. RG 1.206, Combined License Applications for Nuclear Power Plants (LWR Edition), 2007
70. RG 1.209, Guidelines for Environmental Qualification of Safety-Related Computer-Based Instrumentation and Control Systems in Nuclear Power Plants, 2007
71. RG 1.22, Periodic Testing of Protection System Actuation Functions, 1972

DRAFT for Interim Use and Comment

72. RG 1.28, Revision 4, Quality Assurance Program Requirements (Design and Construction), 2010
73. RG 1.47, Revision 1, Bypassed and Inoperable Status Indication for Nuclear Power Plant Safety Systems, 2010
74. RG 1.53, Revision 2, Application of the Single Failure Criterion to Nuclear Power Plant Protection Systems, 2003
75. RG 1.62, Revision 1, Manual Initiation of Protection Action, 2010
76. RG 1.68, Revision 3, Initial Test Programs for Water-Cooled Nuclear Power Plants, August 2007
77. RG 1.70, Revision 3, Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants, 1978, reviewed 2009
78. RG 1.75, Revision 3, Criteria for Independence of Electrical Safety Systems, 2005
79. RG 1.89, Revision 1, Environmental Qualification of Certain Electric Equipment Important to Safety for Nuclear Power Plants, 1984
80. RG 1.97, Revision 4, Criteria for Accident Monitoring Instrumentation for Nuclear Power Plants, 2006
81. RIS 2006-17, NRC Staff Position on the Requirements of 10 CFR 50.36, A Technical Specifications, Regarding Limiting Safety System Settings During Periodic Testing and Calibration of Instrument Channels, August 24, 2006
82. SECY 91-292, Digital Computer Systems for Advanced Light Water Reactors, September 1991
83. SECY 93-087, Policy, Technical, and Licensing Issues Pertaining to Evolutionary and Advanced Light Water Reactor (ALWR) Designs, April 2, 1993
84. SRM SECY 93-087, Policy, Technical, and Licensing Issues Pertaining to Evolutionary and Advanced Light Water Reactor (ALWR) Designs, July 21, 1993
85. DI&C – ISG-05, Task Working Group #5:- Task Working Group #5:- Highly Integrated Control Rooms – Human Factors Issue
86. TR-106439, Guideline on Evaluation and Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Applications, October 1996
87. TR-107330, Generic Requirements Specification for Qualifying a Commercially Available PLC for Safety-Related Applications in Nuclear Power Plants, 1998