February 10, 1994

Docket No. 52-001

Mr. Joseph Quirk GE Nuclear Energy 175 Curtner Avenue Mail Code - 782 San Jose, California 95125

Dear Mr. Quirk:

SUBJECT: ROUND THREE OF STAFF FEEDBACK ON THE ADVANCED BOILING WATER REACT R (ABWR) AMENDMENT 33 TO THE STANDARD SAFETY ANALYSIS REPORT (SSAK), AND TECHNICAL SPECIFICATIONS

I am providing the third round of staff comments on GE's SSAR Amendment 33. They include additional Plant Systems Branch, Standardization Project Branch and a markup of one technical specification (TS) page generated by the staff audit. I expect to provide a few remaining comments on the TS by early next week. If you have any questions on these comments please contact me on 301-504-1132.

(Original signed by)

Chester Poslusny, Project Manager Standardization Project Directorate Associate Directorate for Advanced Reactors and License Renewal Office of Nuclear Reactor Regulation

9402160159 940210 PDR ADOCK 05200001

Enclosure: As stated

cc w/enclosure: See next page

150023

| Docket PDR JNWilso DTang CMcCrac | File M ken 10A19 | PDST R/F *WTravers KShembarger *JMoore, 15B18 MRubin, 10E | *WRussell, 12G18 *RBorchardt CPoslusny ACRS (11) CGrimes, 11E22 | *DCrutchfield *RArchitzel SNinh *WDean, FDO PShea |
|--|------------------------|---|---|---|
| OFC | LA:PDST:ADAR | PM: PDST: ADAR | SC:PDST:ADAR | |
| NAME | PShea De | CPostusny:bs | JNWilson | |
| DATE | 020/094 | 04X7 /94 | Q110/94 | USC FRF CENTER OF |

Mr. Joseph Quirk GE Nuclear Energy

cc: Mr. Steven A. Hucik GE Nuclear Energy 175 Curtner Avenue, Mail Code 782 San Jose, California 95125

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SPLB COMMENTS ON TABLE 1.8 ABWR SSAR

Page 1.8-5, Table 1.8-6, SRP Section 6.2.1.1, The reference to the subsection where this is discussed should be 6.2.1.1.5.6.1.

Page 1.8-18, Table 1.8-19. Item 9.3.3 should add a note similar to 9.2.4 above it which states that the system is partly ABWR and partly COL. This should also be done for all other interfacing systems.

Page 1.8-19, Table 1.8-19. Item 9.5.8 should be revision 2, not 3.

Page 1.8-26, Table 1.8-20. Item 1.26 should say Rev. 3, 2/76 (Issue date), and applicable to the ABWR.

Page 1.8-30, Table 1.8-20. Item 1.89 should say 6/84, not 7/84.

Page 1.8-36, Table 1.8-21. Item 57.1 should have in parentheses (ANSI N208)

Page 1.8-36, Table 1.8-21. Item 57.2 is ANSI N210, not 270. Also, the title is "Design Objectives", not "Design Requirements." Finally, a new entry should follow this:

57.3, "Design Requirements for New LWR Fuel Storage Facilities."

Page 1.8-50, Table 1.8-22. Item 80-03 should be followed by a new entry 80-05, "Vacuum Condition Resulting in Damage to Chemical and Volume Control System (CVCS) Holdup Tanks."

The issue date for Revision 1 of Regulatory Guide 1.89 is June 1984, not July 1984 as in the current version of the SSAR.

| Table | 1.8-5 Summary of D | ifferences from SRP Section | 5 (Continued) |
|-----------|---------------------|-----------------------------|---------------|
| | Specific SRP | Summery Description of | Subsection |
| P Section | Acceptance Criteria | Difference | Where Discuss |

| SRP Section | Acceptance Criteria | Difference | vvnere Discussed |
|-------------|--|-----------------------------|------------------|
| 5.4.7 | Branch Technical Position RSB 5-1, B.1.(b) and (c)—Diverse interlocks for RHR | No diversity of interlocks. | 5.4.7.1.1.7 |
| | suction isolation valves. | | |

Table 1.8-6 Summary of Differences from SRP Section 6

| SRP Section | Specific SRP Acceptance Criteria | Summary Description of Difference | Subsection Where Discussed |
|-------------|---|---|--|
| 6.2.1.1 | Design provision for automatic actuation of wetwell spray 10 min ites following a LOCA signal | Manual actuation of wetwell spray 30 minutes following a LOCA signal | (6.2.1.1.5.5. <u>1</u>) 6.2.1.1.5.6. |
| 6.2.4 | One isolation valve inside and one isolation valve outside containment | Both isolation valves located outside the containment | 6.2.4.3.2.2.2.3 |
| | Purge and vent valves to close in ≤5 seconds | Purge and vent valves will close in ≤20 seconds | 6.2.4.3.2.2.2.3 |

Table 1.8-7 Summary of Differences from SRP Section 7

| SRP Section | Specific SRP Acceptance Criteria | Summary Description of Difference | Subsection Where Discussed 7.3.2.3.2 (1) 7.3.2.4.2 (1) 7.4.2.3.2 (1) | |
|-------------|--|--|--|--|
| 7.1 | Table 7-1: 1a IEEE-279 4.19 | RHR Annunciation at loop level. | | |
| 7.1 | Table 7-1: 2i Some modes of RHR are not GDC 20 automatic. | | 7.3.2.3.2 (2)(b) 7.3.2.4.2 (2)(b) 7.4.2.3.2 (1) | |
| 7.1 | Table 7-1: 3a Reg Guide 1.22 | Clarification of requirements. | 7.3.2.1.2. (3)(a) | |
| 7.1 | Table 7-1: 3a Reg Guide 1.22 | HP/LP interlocks cannot be tested during power operation. | 7.6.2.3.2 (3) | |
| 7.1 | Table 7-1: 3c Reg Guide 1.53 | Continuity testing of certain solenoids. | 7.3.2.1.2. (3)(c) | |
| 7.1 | Table 7-1: 3c Reg Guide 1.53 | Some components are not redundant. | 7.3.2.5.2 (3) 7.4.2.2.2 (3) | |
| 7.1 | Table 7-1: 3c Reg Guide 1.53 | Limited redundancy of remote shutdown. | 7.4.2.4.2 (1) 7,4.2.4.2 (3) | |
| 7.1 | Table 7-1: 3e Reg Guide 1.75 | Alternate positions employed. | 7.1.2.10.5 | |

Conformance with Standard Review Plan and Applicability of Codes and Standards -- Amendment 32

| SRP Section | Specific SRP Acceptance Criteria | Summary Description of Difference | Subsection Where Discussed |
|-------------|-------------------------------------|--|--|
| 7.1 | Table 7-1: 3h Reg Guide 1.118 | Some sensors cannot be tested at power operation. | 7.2.2.2.1 (7) 7.2.2.2.3.1. (10) 7.2.2.2.3.1 (21) |
| 7.1 | Table 7-1: 4i BTP ICSB 22 | Some actuators cannot be exercised during power operation. | 7.3.2.1.2 (4)(d) 7.4.2.3.2 (4)(c) |

Table 1.8-7 Summary of Differences from SRP Section 7 (Continued)

Table 1.8-8 Summary of Differences from SRP Section 8

| SRP Section | Specific SRP Acceptance Criteria | Summary Description of Difference | Subsection Where Discussed | |
|-------------|-------------------------------------|--|---|--|
| 8.1 | Table 8-1: 2f Reg Guide 1.75 | Exception to LOCA trip for certain non-1E loads. | 8.1.3.1.2.2 (6) 8.3.1.4.2.2.4 Appendix 9A | |
| 8.1 | Table 8-1: 2f Reg Guide 1.75 | 15-ft cable marking intervals. | 8.3.1.3.1 | |
| 8.1 | Table 8-1: 2f IEEE-384 | LDS divisional separation in steam tunnel. | 8.3.1.4.2.2.2 | |

Table 1.8-9 Summary of Differences from SRP Section 9

| SRP Section | Specific SRP Acceptance Criteria | Summary Description of Difference | Subsection Where Discussed |
|-------------|---|---|-------------------------------|
| 9.3.1 | II.1—Particles shall not exceed 3 microns. | Instrument air is filtered to 5 microns. | 9.3.6.2 |
| 9.3.2 | II.k.5—Capable of sampling liquid of | Cable of sampling liquids of 1 ci/cm ³ . | 9.3.2.3.1 |
| 9.4.1 | GDC 19 | Site specific. | 6.4.21 |
| | | | |

Table 1.8-10 Summary of Differences from SRP Section 10

| SRP Section | Specific SRP | Summary Description of | Subsection Where |
|-------------|---------------------|------------------------|------------------|
| | Acceptance Criteria | Difference | Discussed |
| None | None | None | None |

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ABWR

| SRP No. | | Appl. Rev. | issued Date | ABWR Appli- cable? | Comments |
|-----------|---|---------------|----------------|--------------------------|----------|
| | Appendix A | 2 | 7/81 | Yes | |
| 6.5.1 | ESF Atmosphere Cleanup Systems | 2 | 7/81 | Yes | |
| 6.5.2 | Containment spray as a Fission Product Cleanup System | 1 | 7/81 | Yes | |
| 6.5.3 | Fission Product Control Systems and Structures | 2 | 7/81 | Yes | |
| 6.5.4 | lce Condenser as a Fission Product Cleanup System | 2 | 7/81 | No | PWR only |
| 6.5.5 | Pressure Suppression Pool as a Fission Product Cleanup System | 0 | 12/88 | Yes | |
| 6.6 | Inservice Inspection of Class 2 and 3 Components | 1 | 7/81 | Yes | |
| 6.7 | Main Steam Isolation Valve Leakage Control System (BWR) | 2 | 7/81 | Yes | NOS |
| Chapter 1 | 7 Instrumentation and Controls | | | | |
| 7.1 | Instrumentation and Controls Introduction | 3 | 2/84 | Yes | |
| | Table 7-1 Acceptance Criteria and Guidelines for Instrumentation and Controls Systems Important to Safety | 3 | 2/84 | Yes | |
| | Table 7-2 TMI Action Plan Requirements for Instrumentation and Controls Systems Important to Safety | 0 | 7/81 | Yes | |
| | Appendix A | 1 | 2/84 | Yes | |
| | Appendix B | 0 | 7/81 | Yes | |
| 7.2 | Reactor Trip System | 2 | 7/81 | Yes | |
| | Appendix A (Superseded by SRP 7.1 App. B) | | | | |
| 7.3 | Engineered Safety Features Systems | 2 | 7/81 | Yes | |
| | Appendix A (Superseded by SRP 7.1 App. B) | | | | |
| 7.4 | Safe Shutdown Systems | 2 | 7/81 | Yes | |
| 7.5 | Information Systems Important to Safety | 3 | 2/84 | Yes | |
| 7.6 | Interlock systems Important to Select | 2 | 7/81 | Yes | |
| 7.7 | Control Systems | 3 | 2/84 | Yes | |
| | Appendix 7-A Branch Technical Positions (ICSB) | 2 | 7/81 | Yes | |
| | BTP ICSB 1 (DOR) (Deleted) | | | | |

Table 1.8-19 Standard Review Plans and Branch Technical Positions Applicable to ABWR (Continued)

1.8-18

Conformance with Standard Review Plan and Applicability of Codes and Standards - Amendment 31

Table 1.8-21 Industrial Codes and Standards Applicable to ABWR (Continued)

| Code or Standard | | |
|---------------------|------------------|---|
| Number | Year | Title |
| OM3 | 1987 | Requirements for preoperational and Initial Startup Vibration Test Program for Water-Cooled Power Plants |
| OM7 | 1986 | Requirements for Thermal Expansion Testing of Nuclear Plant Piping Systems [September 1986 (Draft-Revision 7)] |
| American Peti | rolaum Institute | e (API) |
| 620* | 1986 | Rules for Design and Construction of Large, Welded, Low- Pressure Storage Tanks |
| 650* | 1980 | Welded Steel Tanks for Oil Storage |
| American Soc | iety of Heating | , Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE) |
| 30 | 1978 | Methods of Testing Liquid Chilling Packages |
| 33 | 1978 | Methods of Testing Forced Circulation Air Cooling and Air Heating Colls |
| American Soc | ciety of Mechan | ical Engineers (ASME) |
| AG-1* | 1888/9 | Code on Nuclear Air and Gas Treatment |
| B30.2* | 1983 | Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Grider, Top Running Trolley Hoist) |
| B30.9* | 1984 | Slings |
| B30.10* | 1982 | Hooks |
| B30.11* | 1980 | Monorails and Underhung Cranes |
| B30.16* | 1981 | Overhead Hoists |
| B31.1 | 1986 | Power Piping |
| B96.1* | 1986 | Specification for Welded Aluminum-Alloy Storage Tanks |
| N45.4 | 1972 | Leakage-Rate Testing of Containment Structures for Nuclear Reactors |
| N509* | 1989 | Nuclear Power Plant Air-Cleaning Units and Components |
| N510* | 1989 | Testing of Nuclear Air-Cleaning Systems |
| NQA-1 | 1983 | Quality Assurance Program Requirements for Nuclear Facilitie |
| NQA-1A | 1983 | Addenda to ANSI/ASME NOA-1-1983 |
| Sec II | 1989 | BPVC Section II, Material Specifications |
| Sec III | 1989 | BPVC Section III, Rules for Construction of Nuclear Power Plan Components |

Conformance with Standard Review Plan and Applicability of Codes and Standards -- Amendment 32

| Code or Standard Number | Year | Title |
|-------------------------------|--------|---|
| IEC 880 | 1986 | Software for Computers in the Safety Systems of Nuclear Power Stations |
| OSHA 1910.179 | 1990 | Overhead and Gantry Cranes |
| TEMA C | 1978 | Standards of Tubular Exchanger Manufacturers Association |
| TOP | 1990 | Test Operating Procedure, Part 1, Department of Defense |
| UL-44* | 1983 | Rubber-Insulated Wires and Cables |
| UL-489 [*] | 1991 | Molded-Case Circuit Breakers and Circuit Breaker Enclosures |
| UL-845* | 1988 | Standard for Safety Motor Control Centers - Low Voltage Circuit Breakers |
| | | Crane Manufacturers Association of America, Specification No. 70 |
| | 1.19 | Aluminum Construction Manual by Aluminum Association |
| NCIG-01 | Rev. 2 | Visual Weld Acceptance Criteria for Structural Welding at Nuclear Power Plants |

Table 1.8-21 Industrial Codes and Standards Applicable to ABWR (Continued)

* Also an ANSI code (i.e. ANSI/ASME, ANSI/ANS, ANSI/IEEE etc.).

t ANSI, ANSI/ANS, ANSI/ASME, and ANSI/IEEE codes are included here. Other codes that approved by ANSI and another organization are listed under the latter.

4 As modified by NRC accepted alternate positions to the related Regulatory Guide and identified in Table 2-1 of Reference 1 to Chapter 17.

ERDA 76-21 "Testing of Ventilation Systems," Section 9 of "Industrial Ventilation system"

| No. | Issue Date | Title | Comment | | |
|-------------------------|---------------|--|--|--|--|
| 81-07 | 5/14/81 | Control of Radioactivity Contaminated Material | COL Applicant | | |
| 81-08 | 5/29/81 | Foundation Materials | COL Applicant | | |
| 81-09 | 7/10/81 | Containment Effluent Water | | | |
| 81-11 | 7/24/81 | Inadequate Decay Heat Removal | COL Applicant | | |
| 81-13 | 9/25/81 | Torque Switch Electrical Bypass Circuit | COL Applicant | | |
| 81-14 | 11/5/81 | Main Steam Isolation Valve Failures to Close | COL Applicant | | |
| NUREG | | | | | |
| 0313 Rev. 2 | 6/88 | Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping | | | |
| 0371 | 10/78 | Task Action Plans for Generic Activities Category A | | | |
| 0471 | 6/78 | Generic Task Problem Description: Category B, C & D Tasks | | | |
| 0578 | 9/80 | Performance Testing of BWR and PWR Relief and Safety Valves. | | | |
| 0588 | 12/79 | Interim Staff Position On Environmental Qualification of Safety- Related Electrical Equipment | | | |
| 0619 | 4/80 | BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle Cracking | | | |
| 0626 | 1/80 | Generic Evaluation of Feedwater Transients and Small Break LOCA in GE-Designed Operating Plants and Near-Term Operating License Applications | | | |
| 0660 | 5/80 | NRC Action Plan Developed as a Result of the TMI-2 Accident | | | |
| 0661 Supp. 1 | 8/82 | Safety Evaluation Report – Mark I Containment Long-Term Program – Resolution of Generic Technical Activity A-7 | Subsection 19B.2.3 | | |
| 0710 Rev. 1 | 6/81 | Licensing Requirements for Pending Applications for Construction Permits and Manufacturing License | | | |
| 0737 Supp.1 | 12/82 | Clarification of TMI Action Plan Requirements | | | |
| 0744 | 10/82 | Resolution of the Task A-11 Reactor Vessel Materials Toughness | | | |
| Rev. 1 9 600 0808 | 8/81 | Safety Issue the Review of SAR for Mark II Containment Program Load Evaluation and Acceptance Criteria | Pare | | |
| 0813 | 9/81 | Draft Environmental Statement Related to the Operation of Calloway Plant, Unit No. 1 | ft Environmental Statemen* Related to the Operation of | | |

Table 1.8-22 Experience Information Applicable to ABWR (Continued)

Conformance with Standard Review Plan and Applicability of Codes and Standards - Amendment 32

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| Table | 1.8-22 | Experience | Information | Applicable | to | ABWR | (Continued) |
|-------|--------|------------|-------------|------------|----|------|-------------|
|-------|--------|------------|-------------|------------|----|------|-------------|

| | No. | issue Date | Title | Comment |
|----|----------------------|---------------------|---|--------------------------------------|
| | 0977 | 3/83 | NRC Fact-Finding Task Force Report on the ATWS Events at the Salem Nuclear Generating Station, Unit 1, on February 22 and | |
| U | 0.933 1150 | 4/93 6/89 | 25, 1983 A priorite techion of Generic Seath Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants, Vol. 1 & 2 | Issues |
| | 1161 | 5/80 | Recommended Revisions to USNRC-Seismic Design Criteria | Subsection 198.2.14 |
| | 1174 | 5/89 | Evaluation of Systems Interactions in Nuclear Power Plants | Subsection 19B.2.59 |
| | 1212 | 6/86 | Status of Maintenance in the US Nuclear Power Industry, 1985, Vol. 1, 2 | |
| | 1216 | 8/86 | Safety Evaluation PP2 Related to Operability and Reliability of Emergency Diesel Generators | |
| | 1217 | 4/88 | Evaluation of Safety Implications of Control Systems in LWR Nuclear Power Plants-Technical Findings Related to USI A-47 | Subsection 198.2.17 |
| | 1218 | 4/88 | Regulatory Analysis for Proposed Resolution of USI A-47 | Subsection 19B.2.17 |
| | 1229 | 8/89 | Regulatory Analysis for Resolution of USI A-17 | Subsection 198.2.59 & 198.2.14 |
| | 1233 | 9/89 | Regulatory Analysis for USI A-40 | Subsection 19B.2.14 |
| ġ. | 1273 | 4/88 | Containment Integrity Check-Technical Finds Regulatory Analysis | |
| | 1296 | 2/88 | Peer Review of High Level Nuclear Waste | |
| | 1341 | 5/89 | Regulatory Analysis for Resolution of Generic Issue 115, Enhancement | |
| | 1353 | 4/89 | Regulatory Analysis for the Resolution of Generic Issue 82, "Beyond Design Basis Accidents in Spent Fuel Pools" | Subsection 19B.2.63 |
| | 1370 | 9/89 | Resolution of USI A-48 | Subsection 19B.2.18 |
| | 1275 | 2/91 | Volume 6, Operating Experience Feedback Report Solenoid Operated Valve Problems | |
| | 1339 | * 6/90 | Resolution of Generic Safety Issue 29: Bolting Degradation of Failure in Nuclear Power Plants | Subsection 198.2.62 |
| | CR-3922 | 1/85 | Survey and Evaluation of System Interaction Events and Sources, Vol. 1, 2 | Subsection 19B.2.59 |

Conformance with Standard Review Plan and Applicability of Codes and Standards --- Amendment 32

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Standard Safety Analysis Report

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Safety Issues Index (Continued)

| Title | NRC Priority | SSAR Subsection |
|---|-----------------|----------------------|
| I.C.8 Pilot-Monitoring of Selected Emergency Procedures for Near-Term Operating License Applicants | Resolved | COL App. |
| I.D.1 Control Room Design Reviews | Resolved | 1A.2.2 |
| I.D.2 Plant Safety Parameter Display Console | Resolved | 1A.2.3 |
| I.D.3 Safety System Status Monitoring | Medium | 19A.2.17 |
| I.D.5(2) Plant Status and Post-Accident Monitoring | Resolved | 19B.2.65 |
| I.D.5(3) On-Line Reactor Surveillance System | Near Res. | 19B.2.66 |
| I.F.2(2) Include QA Personnel in Review and Approval of Plant Procedures | Resolved | 19A.2.43 |
| I.F.2(3) Include QA Personnel in All Design, Construction, Installation, Testing, and Operation Activities | Resolved | 19A.2.43 |
| .F.2(6) Increase the Size of Licensees' QA Staff | Resolved | 19A.2.43 |
| I.F.2(9) Clarify Organizational Reporting Levels for the QA Organization | Resolved | 19A.2.43 |
| .G.1 Training Requirements | Resolved | 1A.2.4 |
| .G.2 Scope of Test Program | Resolved | 19B.2.67 |
| I.B.1 Reactor Coolant System Vents | Resolved | 1A.2.5 |
| I.B.2 Plant Shielding to Provide Access to Vital Areas and Protect Safety Equipment for Post-Accident Operation | Resolved | TA.2.6 |
| I.B.3 Post-Accident Sampling | Resolved | 1A.2.7 |
| I.B.4 Training for Mitigating Core Damage | Resolved | COL App. |
| I.B.8 Rulemaking Proceeding on Degraded Core Accidents | Resolved | 19A.2.1 |
| I.D.1 Testing Requirements | Resolved | 1A.2.9 |
| I.D.3 Relief and Safety Valve Position Indication | Resolved | 1A.2.10 |
| I.E.1.3 Update Standard Review Plan and Develop Regulatory Guide | Resolved | COL App. |
| I.E.4.1 Dedicated Penetrations | Resolved | 1A.2.13 |
| I.E.4.2 Isolation Dependability | Resolved | 1A.2.14 |
| I.E.4.4 Purging | Resolved | 19A.2.27 |
| I.E.6.1 Test Adequacy Study | Resolved | 19B.2.68 COL App. |
| I.F.1 Additional Accident Monitoring Instrumentation | Resolved | 1A.2.15 |
| I.F.2 Identification of and Recovery from Conditions Leading to Inadequate Core Cooling | Resolved | 1A.2.16 |

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Standard Safety Andlysis Report

Safety Issues Index (Continued)

| Title | NRC Priority | SSAR Subsection |
|--|-----------------|-----------------------|
| II.F.3 Instruments for Monitoring Accident Conditions | Resolved | 1A.2.17 |
| II.J.4.1 Revise Deficiency Reporting Requirements | Resolved | COL App. |
| II.K.1(5) Safety-Related Valve Position Description | Resolved | 1A.2.18 18.8.7 |
| II.K.1(10) Review and Michily Procedures for Removing Safety- Related Systems from Service | Resolved | 1A.3.2 |
| I.K.1(13) Propose Technical Specifications Changes Reflecting mplementation of All Bulletin Items | Resolved | 19B.2.69 |
| I.K.1(22) Describe Automatic and Manual Actions for Proper Functioning of Auxiliary Heat Removal Systems When FW System Not Operable | Resolved | 1A.2.20 |
| I.K.1(23) Describe Uses and Types of RV Level Indication for Automatic and Manual Initiation Safety Systems | Resolved | 1A.2.21 |
| I.K.3(3) Report Safety and Relief Valve Failures Promptly and Challenges Annually | Resolved | 1A.3.4 |
| I.K.3(11) Control Use of PORV Supplied by Control Components, nc. Until Further Review Complete | Resolved | 19B.2.70 |
| I.K.3(13) Separation of HPCI and RCIC System Initiation Levels | Resolved | 1A.2.22 |
| I.K.3(15) Modify Break Detection Logic to Prevent Spurious solation of HPCI and RCIC Systems | Resolved | 14.2.23 COL App. 9 |
| I.K.3(16) Reduction of Challenges and Failures of Relief Valves- easibility Study and System Modification | Resolved | 1A.2.24 |
| I.K.3(17) Report and Outage of ECC Systems—Licensee Report and Technical Specification Changes | Resolved | 1A.2.25 |
| .K.3(18) Modification of ADS Logic—Feasibility Study and Modification for Increased Diversity for Some Event Sequences | Resolved | 1A.2.26 |
| I.K.3(21) Restart of Core Spray and LPCI Systems on Low Level- Design and Modification | Resolved | 1A.2.27 |
| I.K.3(22) Automatic Switchover of RCIC System Suction—Verify Procedures and Modify Design | Resolved | 1.A.2.28 |
| I.K.3(24) Confirm Adequacy of Space Cooling for HPCI and RCIC Systems | Resolved | 1A.2.29 |
| .K.3.(25) Effect of Loss of AC Power on Pump Seals | Resolved | 1A.2.30 |
| .K.3(27) Provide Common Reference Level for Vessel Level astrumentation | Resolved | 1A.2.21 |
| .K.3(28) Study and Verify Qualification of Accumulators on ADS /alves | Resolved | 1A.2.31 |

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Resolution of Applicable Unresolved Safety Issues and Generic Safety Issues - Amendment 33

Control Rod Scram Times 3.1.4

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Table 3.1.4-1 Control Rod Scram Times

- OPERABLE control rods with scram times not within the limits of this Table are considered "slow."
- 2. Enter applicable Conditions and Required Actions of LCO 3.1.3, "Control Rod Operability," for control rods with scram times > [] seconds to 60% rod insertion position. Are inoperable, in accordance with SR 3.1.3.4, and are not considered "slow." These control rods

| | SCRAM TIMES(a) (seconds) | | | |
|--|--|---|---|--|
| ROD POSITION FERCENT INSERTION (%) | REACTOR STEAM DOME PRESSURE(b) 0 Kg/cm ² g | REACTOR STEAM DOME PRESSURE(b) 66.8 Kg/cm ² g | REACTOR STEAM DOME PRESSURE(b) 73.8 Kg/cm ² g | |
| 10 | (c) | [] | [] | |
| 40 | (c) | [] | [] | |
| 60 | | [] | [] | |

- (a) Maximum scram time from fully withdrawn position, based on de-energization of scram pilot valve solenoids as time zero.
- (b) For intermediate reactor steam dome pressures, the scram time criteria are determined by linear interpolation.
- (c) For reactor steam dome pressure ≤ 66.8 Kg/cm²g, only 60% rod insertion position scram time limit applies.

Amendment 33