APPENDIX B REFERENCES

Where appropriate, the specific date or addendum for certain references is given in the related section of this report.

American Concrete Institute (ACI)

- ---, ACI-117-90, "Standard Specifications for Tolerances for Concrete Construction and Materials."
- ---, ACI 347. "Guide to Form work for Concrete," 1994.
- ---, ACI-349, "Code Requirements for Nuclear Safety Related Structures."

American Iron and Steel Institute (AISI)

---, AISI Specification for the Design of Cold Formed Steel Structural Members, Parts 1 and 2, 1996 Edition and 2000 Supplement.

American National Standards Institute (ANSI)

- ---, ANSI B31.1, "Power Piping."
- ---, ANSI N.45.2.1, "Cleaning of Fluid Systems and Associated Components During Construction Phase of Nuclear Power Plants," 1973.

American National Standards Institute/American Institute of Steel Construction (ANSI/AISC)

---, ANSI/AISC N690-1984. Specification for the Design Fabrication and Erection of Steel Safety Related Structures for Nuclear Facilities.

American National Standards Institute/Air Movement and Control Association (ANSI/AMCA)

- ---, ANSI/AMCA 210-1985, "Laboratory Methods of Testing Fans for Rating."
- ---, ANSI/AMCA 211-1987, "Certified Ratings Program Air Performance."
- ---, ANSI/AMCA 300-1985, "Reverberant Room Method of Testing Fans for Rating Purposes."

---, ANSI/AMCA 500-1989, "Testing Methods for Louvers, Dampers, and Shutters."

American National Standards Institute/American Nuclear Society (ANSI/ANS)

---, ANSI/ANS Standard HPSSC-6.8.1-1981, "Location and Design Criteria for Area Radiation Monitoring Systems for Light-Water Nuclear Reactors," May 1981.

American National Standards Institute/Air Conditioning and Refrigeration Institute (ANSI/ARI)

- ---, ANSI/ARI 410-1991, "Forced-Circulation Air Cooling and Air Heating Coils."
- ---, ANSI/ARI 620-1996, "Self-Contained Humidifiers, Standards."

American National Standards Institute/American Society of Mechanical Engineers (ANSI/ASME)

- ---, ANSI/ASME AG-1-1997, "Code on Nuclear Air and Gas Treatment."
- ---, ANSI/ASME AG-1a-2000, "Housings."
- ---, ANSI/ASME NQA-1, "Quality Assurance Program Requirements for Nuclear Facilities," 1983 Edition (as endorsed by Regulatory Guide 1.28, Revision 3) through NQA-1b-1991 Addenda.
- ---, ANSI/ASME NQA-2-1983, "Quality Assurance Requirements for Nuclear Power Plants."
- ---, ANSI/ASME OM-1995 Code, "Code for Operation and Maintenance of Nuclear Power Plants."

American National Standards Institute/CGA (ANSI/CGA)

—, ANSI/CGA G-7.1, "Commodity Specification for Air"

American National Standards Institute/Institute for Electrical and Electronic Engineers (ANSI/IEEE)

---, ANSI/IEEE 7-4.3.2-1993, "IEEE Standard Criteria for Digital Computers in Safety Systems of Nuclear Power Generating Stations."

American National Standards Institute/Instrument Society of America (ANSI/ISA)

---, ANSI/ISA S7.3-1981, "Quality Standard for Instrument Air."

American National Standards Institute/American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE)

---, ANSI/ASHRAE 33-1978, "Methods of Testing for Rating Forced Circulation Air Cooling and Air Heating Coils."

- ---, ANSI/ASHRAE 52.1-1992, "Gravimetric and Dust Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, Standards"
- ---, ASHRAE 62-1999, "Ventilation for Acceptable Indoor Air Quality."
- -, ASHRAE 126, 2000, "Method of Testing HVAC Air Ducts."

American National Standards Institute/Underwriters Laboratories, Inc. (ANSI/UL)

- ---, UL-555, "Fire Dampers," 1999.
- ---, UL-555S, "Leakage Rated Dampers for Use in Smoke Control System," 1999.
- ---, UL-586, "High-Efficiency, Particular, Air-Filter Units," 1996.
- ---, UL-900, "Test Performance of Air Filter Units, Class I Criteria," 1994.
- ---, UL-1095, "Electric Central Air Heating Equipment," 1995.
- —, UL-1996, "Electric Duct Heaters," 1996.

American Nuclear Society (ANS)

- ---, ANS-5.1, "Decay Energy Release Rates Following Shutdown of Uranium-Cooled Thermal Reactors," October 1971, Revised October 1973.
- ---, ANS-5, "Decay Energy Release Rates Following Shutdown of Uranium Fueled Thermal Reactors." October 1971.
- ---, ANS 57.1-1980, "Design Requirements for Light Water Reactor Fuel Handling Systems"
- ---, ANS 57.2-1976, "Design Objectives for Light Water Reactor Spent Fuel Storage Facilities at Nuclear Power Stations"
- ---, ANS 57.3-1981, "Design Requirements for New LWR Fuel Storage Facilities"

American Society of Civil Engineers (ASCE)

- ---, ASCE 7-98, "Minimum Design Loads for Buildings and Other Structures."
- ---, ASCE Paper 3269, "Wind Forces on Structures," Vol. 126, Part II (1961).

American Society of Mechanical Engineers (ASME)

- ---, ASME N-122-2, "Procedure for Evaluation of the Design of Rectangular Cross Section Attachments on Class 1 Piping, Section III, Division 1."
- ---, ASME N-284, Revision 0, Code Case.

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- ---, ASME N-318-5, "Procedure for Evaluation of the Design of Rectangular Cross Section Attachments on Class 2 or 3 Piping, Section III, Division 1."
- ---, ASME N-319-3, "Alternate Procedure for Evaluation of Stresses in Butt Welding Elbows in Class 1 Piping, Section III, Division 1."
- ---, ASME N-391-2, "Procedure for Evaluation of the Design of Hollow Circular Cross Section Welded Attachments on Class 1 Piping, Section III, Division 1."
- ---, ASME N-392-3, "Procedure for Evaluation of the Design of Hollow Circular Cross Section Welded Attachments on Class 2 and 3 Piping, Section III, Division 1."
- ---, ASME N-509-1989."Nuclear Power Plant Air-Cleaning Units and Components."
- ---, ASME N-510-1989, "Testing Nuclear Air Cleaning Systems."
- ---, ASME NQA2a, Part 2.7, "Quality Assurance Requirements of Computer Software for Nuclear Facility Applications."

Boiler and Pressure Vessel Code

- ---, Section III, "Nuclear Power Plant Components," 1989.
- ---, Section III, "Nuclear Power Plant Components," 1998 Edition, 2000 Addenda.
- ---, Section VIII, Division 1, 1989.
- ---, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," 1998 Edition, 2000 Addenda.

American Society for Testing and Materials (ASTM)

- ---, ASTM E119, "Standard Test Method of Fire Tests of Building Construction and Materials."
- ---, ASTM E741-2000, "Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution."
- ---, ASTM D3843-00, "Selection of Test Methods for Coatings for Use in Light-Water Nuclear Power Plants."
- ---, ASTM D3911-95, "Evaluating Coatings Used in Light-Water Nuclear Power Plants at Simulated Designed-Basis Accident (DBA) Conditions."
- ---, ASTM D 5144-00, "Standard Guide for Use of Protective Coating Standards in Nuclear Power Plants."

American Welding Society (AWS)

- ---, AWS D 1.1-2000, Structural Welding Code.
- ---, AWS D 1.4-89, Reinforcing Steel Welding Code.

Electric Power Research Institute (EPRI)

- ---, "Advanced Light Water Reactor Utility Requirements Document," 1992.
- —, NP-933, "Nuclear Pressure Vessel Steel Database."
- ---, NP-2511-CCM-A, "VIPRE-01: A Thermal-Hydraulic Code for Reactor Core," Volume 1-3 issued August 1989, Volume 4, April 1987.
- ---, NP-2770-LD, "EPRI PWR Safety Valve Test Report," December 1982.
- ---, NP-4453, "Heat Stress Management Program for Power Plants," 1986.
- ---, NP-4767, "Evaluation of BWR Top-Guide Integrity," November 1986.
- ---, NP-5930, "A Criterion for Determining Exceedance of the Operating Basis Earthquake," July 1988.
- ---, NP-6559, "Voice Communication Systems Compatible with Respiratory Protection."
- ---, "Piping and Fitting Dynamic Reliability Program, Volume I," (Draft), November 1989.
- ---, TR-100082, "Standardization of the Cumulative Absolute Velocity," December 1991.
- ---, TR-100370, "Fire Induced Vulnerability Evaluation (FIVE) methodology," 1992.
- ---, TR-102323-R1, "Guidelines for Electromagnetic Interference Testing in Power Plants".
- ---, TR-106439, "Guideline on Evaluation and Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Applications," approved by the NRC in April 1997.
- ---, TR-107330, "Generic Requirements Specification for Qualifying a Commercially Available PLC [Programable Logic Controller] for Safety-Related Applications in Nuclear Power Plants," approved by the NRC on July 30, 1998.

Federal Emergency Management Agency (FEMA) Report

—, FEMA 403, "World Trade Center Building Performance Study: Data Collection, Preliminary Observations and Recommendations," dated May 2002.

Idaho National Engineering Laboratory (INEL) or Idaho National Engineering and Environmental Laboratory (INEEL)

- —, INEL-96/0040, S. Banerjee, et al., "Top-Down Scaling Analysis Methodology for AP600 Integral Tests," May 1997
- ---, INEL-94/0064, "Common-Cause Failure data Collection and Analysis System," December 1995.

[&]quot;Thermal Stratification, Cycling and Striping (TASCS),"

---, INEEL Letter Report INEL/EXT-97-00779, "Potential for AP600 In-Vessel Retention Through Ex-Vessel Flooding," December 1997.

Institute for Electrical and Electronic Engineers (IEEE)

- ---, IEEE 317-1976, "Electric Protection Assemblies in Containment Structures for Nuclear Power Generating Stations".
- ---, IEEE Standard 323-1974, "IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations."
- ---, IEEE Std 344-1987, "IEEE Recommended Practices for Seismic Qualification of Class 1E Equipment for Nuclear Power Generating Stations".
- —, IEEE-383, "IEEE Standard for Type Test of Class IE Electric Cables, Field Splices, and Connections for Nuclear Power Generating Stations"
- ---, IEEE 384-1974, "IEEE Standard Criteria for Independence of Class 1E Equipment and Circuits."
- ---, IEEE Std 384-1992, "Criteria for Independence of Class 1E Equipment and Circuits,"
- ---, IEEE 422-1986, "IEEE Guide for the Design and Installation of Cable Systems in Power Generating Stations".
- ---, IEEE Std 603-1991, "IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations".
- ---, IEEE 665-1995, "Guide for Generating Station Grounding".
- ---, IEEE 730-1989, "Software Quality Assurance Plans."
- ---, IEEE 828-1990, "Standard for Software Configuration Management Plans."
- ---, IEEE 829-1983, "Standard for Software Test Documentation."
- ---, IEEE 830-1984, "Guide for Software Requirements Specifications."
- ---, IEEE 946-1992, "IEEE Recommended Practice for the Design of DC Auxiliary Power Systems for Generating Stations.
- ---, IEEE 1042-1987, "Guide to Software Configuration Management."
- ---, IEEE 1050-1996, "Guide for Instrumentation and Control Equipment Grounding in Generating Stations."
- ---, IEEE 1202, "Standard for Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies."
- ---, 7-4.3.2, "Application Criteria for Programmable Digital Computer Systems in Safety Systems of Nuclear Power Generating Stations," 1982.

- ---, 7-4.3.2, "IEEE Standard Criteria for Digital Computers in Safety Systems of Nuclear Power generating Stations," 1993
- ---, MIL-STD-461C, "Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference".

International Electrotechnical Commission (IEC)

---, IEC 880-1986, "Software for Computers in Safety Systems of Nuclear Power Stations."

National Fire Protection Association (NFPA)

- ---, NFPA 10, "Portable Fire Extinguishers."
- ---, NFPA 13, "Installation of Sprinkler Systems."
- ---, NFPA 14, "Installation of Standpipe and Hose Systems."
- ---, NFPA 15, "Water Spray Fixed Systems for Fire Protection."
- ---, NFPA 20, "Centrifugal Fire Pumps."
- ---, NFPA 22, "Water Tanks for Private Fire Protection."
- ---, NFPA 24, "Installation of Private Fire Service Mains and Their Appurtenances."
- ---, NFPA 30, "Flammable and Combustible Liquids Code."
- ---, NFPA 50A, "Gaseous Hydrogen Systems at Consumers Sites."
- ---, NFPA 70, 1999, "National Electrical Code."
- ---, NFPA 72, "Protective Signaling Systems."
- ---, NFPA 80, "Fire Doors and Windows."
- ---, NFPA 90A, "Installation of Air Conditioning and Ventilation Systems."
- ---, NFPA 92A, "Recommended Practice for Smoke-Control System."
- ---, NFPA 204, "Smoke and Heat Venting"
- ---, NFPA 251, "Tests of Fire Endurance of Building Construction and Materials"
- ---, NFPA 804, "Fire Protection For Advanced Light Water Reactor Electric Generating Plants"
- ---, NFPA 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants"
- ---, NFPA 780, "Standard for the Installation of Lightning Protection Systems," 1997.

B-7 NUREG-1512

Nuclear Construction Issues Group (NCIG)

---, NCIG-01 Standards, Revision 2, "Visual Weld Acceptance Criteria for Structural Welding at Nuclear Power Plants," May 7, 1985.

Numerical Applications Incorporated (NAI)

- ---, NAI-8907-02, Revision 4, "GOTHIC Containment Analysis Package Users Manual, Version 4.0," T. George, et. al., June 1994.
- ---, NAI-8907-06, Revision 3, "GOTHIC Containment Analysis Package Technical Manual, Version 4.0," T. George, et. al., September 1993.
- ---, NAI-8907-09, Revision 2, "GOTHIC Containment Analysis Package Qualification Report, Version 4.0," L. Wiles, et. al., September 1993.

Sheet Metal and Air Conditioning Contractors' National Association (SMACNA)

- ---, SMACNA-1980, "Rectangular industrial Duct Construction Standards"
- ---, SMACNA-1995, "HVAC Duct Construction Standards Metal and Flexible"
- ---, SMACNA-1999, "Round industrial Duct Construction Standards"
- ---, SMACNA 1985, "HVAC Duct Leakage Test Manual"
- ---, SMACNA-1993, "HVAC Systems Testing, Adjusting and Balancing."

U.S. Department of Defense (DOD)

- ---, MIL-HDBK-759C, 31 July 1995, "Human Engineering Design Guidelines."
- ---, MIL-STD-1472E, 31 October 1996, "Human Engineering."

United States Nuclear Regulatory Commission

Bulletins

- BL-80-03, "Loss of Charcoal from Absorber Cells."
- BL-80-15, "Possible Loss of Emergency Notification System (ENS) with Loss of Offsite Power."
- BL-80-20, "Failures of Westinghouse Type W-2 Spring Return to Neutral Control Switches."
- BL 01-01, "Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles," August 3, 2001.
- BL 02-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity," March 18, 2002.

BL 02-02, "Reactor Pressure Vessel Head and Vessel Head Penetration Nozzle Inspection Programs," August 9, 2002.

Code of Federal Regulations

Title 10 - Energy, Part 50 - Domestic Licensing of Production and Utilization Facilities.

Title 10 - Energy, Part 52 - Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants.

Title 10- Energy, Part 100 - Reactor Site Criteria.

Commission Papers

SECY-88-147, "Integration Plan for Closure of Severe Accident Issues," May 25, 1988.

SECY-90-016, "Evolutionary Light Water Reactor (LWR) Certification Issues and Their Relationship to Current Regulatory Requirements," January 12, 1990, and SRM dated June 26, 1990.

SECY-90-377, "Requirements for Design Certification Under 10 CFR Part 52," and SRM dated February 15, 1991.

SECY-90-406, "Quarterly Report on Emerging Technical Concerns," December 17, 1990.

SECY-92-053, "Use of Design Acceptance Criteria During 10 CFR Part 52 Design Certification Reviews," February 19, 1992.

SECY-93-067, "Final Policy Statement on TS Improvements for Nuclear Power Reactors," July 22, 1993.

SECY-93-087, "Policy, Technical, and Licensing Issues Pertaining to Evolutionary and Advanced Light-Water Reactor (ALWR) Designs," April 2, 1993 and SRM dated July 21, 1993.

SECY-94-084, "Policy and Technical Issues Associated with the Regulatory Treatment of Non-Safety Systems in Passive Plant Design," March 28, 1994 and SRM dated June 30, 1994.

SECY-96-128, "Policy and Key Technical Issues Pertaining to the Westinghouse AP600 Standardized Passive Reactor Design," June 12, 1996 and SRM dated January 15, 1997...

SECY-97-044, "Policy and Key Technical Issues Pertaining to the Westinghouse AP600 Standardized Passive Reactor Design," February 18, 1997.

SECY-98-161, "The Westinghouse AP600 Standard Design as it Relates to the Fire Protection and the Spent Fuel Pool Cooling Systems," July 1, 1998.

SECY-99-169, "Treatment of Averted Onsite Costs in Regulatory Analyses," July 1, 1999.

SECY-02-0059, "Use of Design Acceptance Criteria for the AP1000 Standard Plant Design," April 1, 2002.

Appendix B

Generic Letters (GL)

- GL 80-009, "Low Level Radioactive Waste Disposal," January 29, 1980.
- GL 80-013, "Qualification Of Safety Related Electrical Equipment," February 21, 1980.
- GL 80-016, "IEB 79-01b Environmental Qualification Of Class 1E Equipment," February 29, 1980.
- GL 80-035, "Effect Of A DC Power Supply Failure On ECCS Performances," April 25, 1980.
- GL 80-082, "IEB 79-01b Supplement 2 Environmental Qualification Of Class 1E Equipment," September 30, 1980.
- GL 81-12, "Fire Protection Rule."
- GL 81-039, "NRC Volume Reduction Policy," November 30, 1981.
- GL 82-09, "Environmental Qualification of Safety Related Electrical Equipment," April 20, 1982.
- GL 82-33, "Supplement 1 to NUREG-0737, Requirements for Emergency Response Capability," December 17, 1982.
- GL 84-24, "Certificate of Compliance to 10 CFR50.49, Eq of Electric Equipment Important to Safety for Npps," December 24, 1984.
- GL 86-10, "Implementation of Fire Protection Requirements."
- GL 86-15, "Information Relating to Compliance With 10 CFR 50.49 "Eq of Electric Equipment Important to Safety For Nuclear Power Plants," September 22, 1986.
- GL 88-07, Modified Enforcement Policy Relating to 10 CFR 50.49, "Environmental Qualification Of Electrical Equipment Important To Safety," April 7, 1988.
- GL 88-14, "Instrument Air Supply Problems Affecting Safety-Related Equipment."
- GL 88-15, "Electric Power Systems Inadequate Control Over Design Process, " September 12, 1988.
- GL 88-17, "Loss of Decay Heat Removal."
- GL 89-08, "Erosion/Corrosion Induced Pipe Wall Thinning," May 1989.
- GL 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle"

Federal Register Notice

NRC published a model Safety Evaluation Report on eliminating the post-accident sampling system requirements from the technical specifications for operating plants (Federal Register Volume 65, Number 211, October 31, 2000

NUREG Reports

NUREG-0017, "Calculation of Releases of Radioactive Materials in Liquid and Gaseous Effluents from Pressurized Water Reactors," Revision 1, April 1985.

NUREG-0138, "Staff Decision of Fifteen Technical Issues Listed in Attachment to November 3, 1976, Memorandum from Director, NRR to NRR Staff."

NUREG-0452, Revision 4, "Standard Technical Specifications (STS) Pressurized Water Reactors."

NUREG-0493, "A Defense-in-Depth and Diversity Assessment of the RESAR-414 Integrated Protection System," March 1979.

NUREG-0570, "Toxic Vapor Concentrations in the Control Room Following A Postulated Accidental Release," June 1979.

NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment," November/December 1979, Revision 1, July 1981.

NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants," July 1980.

NUREG-0654 (FEMA-REP-1), "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," February 1980, (Revision 1) November 1980.

NUREG-0696, "Functional Criteria for Emergency Response Facilities," February 1981.

NUREG-0700, "Guidelines for Control Room Design Review."

NUREG-0711, "Human Factors Engineering Program Review Model," 1994.

NUREG-0737 and supplements, "Clarification of TMI Action Plan Requirements," November 1980; (Supplement 1) January 1983; (Supplement) October 1989.

NUREG-0797, Supplement No. 9, regarding Comanche Peak Steam Electric Station Units 1 and 2, March 1985.

NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," LWR Edition, July 1981, (Revision 1, 1984a).

NUREG-0800 (Appendix A to Section 18.2), "Human Factors Guidelines for the Safety Parameter Display System (SPDS)," 1984b.

NUREG-0933, "A Prioritization of Generic Safety Issues," Latest Supplement (22) was dated March 1998.

NUREG-1061, Volume 3, "Evaluation of Potential for Pipe Breaks, Report of the U.S. Nuclear Regulatory Commission Piping Review Committee," November 1984.

NUREG-1242, "NRC Review of Electric Power Research Institute's Advanced Light Water Reactor Utility Requirements Document."

NUREG-1275, "Operating Experience Feedback Report."

NUREG-1367, "Piping Functional Capability," November 1992.

NUREG-1431, "Standard Technical Specifications for Westinghouse Reactors," April 1995.

NUREG-1449, "Shutdown and Low Power Operation at Commercial Nuclear Power Plants in the United States."

NUREG-1465, "Accident Source Terms for Light-Water Nuclear Power Plants," February 1995.

NUREG-1512, "Final Safety Evaluation Report Related to Certification of the AP600 Standard Design," September 1998.

NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants."

NUREG/CR-0660, "Enhancement of Onsite Emergency Diesel Generator Reliability," February 1979.

NUREG/CR-2017, "Proceedings of the Workshop on the impact of Hydrogen on Water Reactor Safety" August 1981

NUREG/CR-3127, "Probabilistic Seismic Resistance of Steel Containment," January 1984.

NUREG/CR-4334 "An Approach to the Quantification of Seismic Margins in Nuclear Power Plants" August, 1985.

NUREG/CR-4461, "Tornado Climatology of the Contiguous United States," May 1, 1986.

NUREG/CR-4664, "Tornado Climatology of the Contiguous United States," May 1, 1988.

NUREG/CR-5132, "Severe Accident Insights Report," April 1988.

NUREG/CR-5535, Revision 1, "RELAP5/Mod3.3 Code Manual Volume III: Development Assessment Problems," December 2001.

NUREG/CR-5564, "Core-Concrete Interactions Using Molten UO₂ With Zirconium on a Basaltic Basemat," August 1992.

NUREG/CR-5597, "In-Vessel Zircaloy Oxidation/Hydrogen Generation Behavior During Severe Accidents," September 1990.

NUREG/CR-5603, "Pressure-Dependent Fragilities for Piping Components," October 1990.

NUREG/CR-5704, "Effects of LWR Coolant Environments on Fatigue on Fatigue Design Curves of Austenitic Stainless Steels."

NUREG/CR-5809, "An Integrated Structure and Scaling Methodology for Severe Accident Technical Issue Resolution" (Draft Report for Comment), Idaho National Engineering Laboratory, November 1991.

NUREG/CR-6414, "Piping Benchmark Problems for the the applicant AP600," August 1996.

NUREG/CR-6519, "Screening Reactor Steam/ Water Piping Systems for Water Hammer," September 1997.

NUREG/CR-6583, "Effects of LWR Coolant Environments on Fatigue Design Curves of Carbon and Low-Alloy Steels."

Policy Statements

Policy Statement, "Severe Reactor Accidents Regarding Future Designs and Existing Plants," August 8, 1985.

Policy Statement, "Safety Goals for the Operations of Nuclear Power Plants," August 4, 1986.

Policy Statement, "Nuclear Power Plant Standardization," September 15, 1987.

Policy Statement, "The Use of Probabilistic Risk Assessment Methods in Nuclear Regulatory Activities," August 16, 1995.

Regulatory Guides (RG)

- RG 1.8, "Qualification and Training of Personnel for Nuclear Power Plants," (Revision 2) April 1987.
- RG 1.9, "Selection, Design, and Qualification of Diesel-Generator Units Used as Standby (Onsite) Electric Power Systems at Nuclear Power Plants."
- RG 1.11, "Instrument Lines Penetrating Primary Reactor Containment."
- RG 1.13, "Spent Fuel Storage Facility Design Basis."
- RG 1.14, "Reactor Coolant Pump Flywheel Integrity," Revision 1.
- RG 1.20, "Comprehensive Vibration Assessment Program for Reactor Internals During Preoperational And Initial Startup Testing."
- RG 1.21, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants."
- RG 1.26, "Quality Group Classification and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants," (Revision 3) February 1976.
- RG 1.27, "Ultimate Heat Sink for Nuclear Power Plants."

- RG 1.28, "Quality Assurance Program Requirements (Design and Construction)."
- RG 1.29, "Seismic Design Classification."
- RG 1.31, "Control of Ferrite Content in Stainless Steel Weld Metal."
- RG 1.33, "Quality Assurance Program Requirements."
- RG 1.34, "Control of Electroslag Weld Properties."
- RG 1.36, "Nonmetallic Thermal Insulation for Austenitic Stainless Steel."
- RG 1.37, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants," March 1973.
- RG 1.38, "Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants."
- RG 1.39, "Housekeeping Requirements for Water-Cooled Nuclear Power Plants."
- RG 1.41, "Preoperational Testing of Redundant On-Site Electric Power Systems To Verify Proper Load Group Assignments," (Revision 0) March 1973.
- RG 1.43, "Control of Stainless Steel Weld Cladding of Low-Alloy Steel Components."
- RG 1.44, "Control of Sensitized Stainless Steel."
- RG 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems."
- RG 1.47, "Bypassed and Inoperable Status Indication for Nuclear Power Plant Safety Systems," May 1973.
- RG 1.50. "Control of Preheat Temperature for Welding of Low-Allov Steel Components."
- RG 1.52, "Design, Testing, and Maintenance for Postaccident Engineered-Safety-Feature Atmospheric Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants," (Revision 3) March 1978.
- RG 1.54, "Quality Assurance Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants."
- RG 1.57, "Design Limits and Loading Combinations for Metal Primary Reactor Containment System Components," June 1973.
- RG 1.59, "Design Basis Floods for Nuclear Power Plants."
- RG 1.60, "Design Response Spectra for Seismic Design of Nuclear Power Plants."
- RG 1.61, "Damping Valves for Seismic Design of Nuclear Power Plants," October 1973.

- RG 1.63, "Electric Penetration Assemblies in Containment Structures for Nuclear Power Plants," Revision 3, February 1987.
- RG 1.65, "Materials and Inspections for Reactor Vessel Closure Studs."
- RG 1.68, "Initial Test Programs for Water-Cooled Nuclear Power Plants."
- RG 1.68.3, "Preoperational Testing of Instrument and Control Air Systems."
- RG 1.69, "Concrete Radiation Shields for Nuclear Power Plants," December 1973.
- RG 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants," Revision 3, November 1978.
- RG 1.71, "Welder Qualification for Areas of Limited Accessibility."
- RG 1.75, "Physical Independence of Electric Systems."
- RG 1.76, "Design Basis Tornado for Nuclear Power Plants," April 1974.
- RG 1.78, "Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release," (Revision 1) December 2001..
- RG 1.82, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident," May 1996.
- RG 1.84, "Design and Fabrication Code Case Acceptability, ASME Section III, Division 1."
- RG 1.85, "Materials Code Case Acceptability—ASME Section III, Division 1.".
- RG 1.89, "Environmental Qualification of Certain Electric Equipment Important to Safety for Nuclear Power Plant."
- RG 1.91, "Evaluations of Explosions Postulated to Occur on Transportation Routes Near Nuclear Power Plants."
- RG 1.92, "Combining Modal Responses and Spatial Components in Seismic Response Analysis," (Revision 1) February 1976.
- RG 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release," February 1975, (Revision 1) January 1977.
- RG 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident."
- RG 1.99, "Radiation Damage to Reactor Vessel Materials," (Revision 2) May 1988.
- RG 1.100, "Seismic Qualification of Electric and Mechanical Equipment for Nuclear Power Plants."

- RG 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," (Revision 3) August 1992.
- RG 1.102, "Flood Protection for Nuclear Power Plants."
- RG 1.105, "Instrument Setpoints for Safety-Related Systems."
- RG 1.106, "Thermal Overload Protection for Electric Motors on Motor-Operated Valves."
- RG 1.110, "Cost-Benefit Analysis for Radwaste Systems for Light-Water-Cooled Nuclear Power Reactors (for Comment)," March 1973.
- RG 1.112, "Calculation of Releases of Radioactive Materials in Gaseous and Liquid Effluents from Light-Water-Cooled Power Reactors".
- RG 1.115, "Protection Against Low-Trajectory Turbine Missiles," March 1976, (Revision 1) July 1977.
- RG 1.116, "Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems".
- RG 1.117, "Tornado Design Classification,"
- RG 1.118, "Periodic Testing of Electric Power and Protection Systems,.
- RG 1.122, "Development of Floor Design Response Spectra for Seismic Design of Floor-Supported Equipment or Components."
- RG 1.128. "Installation Design and Installation of Large Lead Storage Batteries for Nuclear Power Plants," (Revision 1) October 1978.
- RG 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors."
- RG 1.136, "Materials, Construction, and Testing of Concrete Containments (Articles CC-1000, -2000, and -4000 through -6000 of the "Code for Concrete Reactor Vessels and Containments")."
- RG 1.139, "Guidance For Residual Heat Removal."
- RG 1.140, "Design, Testing, and Maintenance Criteria for Normal Ventilation Exhaust System Air Filtration and Adsorption Units of Light Water Cooled Nuclear Power Plants," (Revision 2) June 2001.
- RG 1.141, "Containment Isolation Provisions for Fluid Systems."
- RG 1.142, "Safety-Related Concrete Structures for Nuclear Power Plants (Other than Reactor Vessels and Containments)," Revision 2, November 2001.
- RG 1.143, "Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants."

- RG 1.147, "Inservice Inspection Code Case Acceptability ASME Section XI, Division 1,"
- RG 1.152, "Criteria for Digital Computers in Safety Systems for Nuclear Power Plants."
- RG 1.153, "Criteria for Safety Systems".
- RG 1.155, "Station Blackout."
- RG 1.163, "Performance-Based Containment Leak-Test Program."
- RG 1.183, "Alternative Radiological Source Terms For Evaluating Design Basis Accidents At Nuclear Power Reactors," July 2000.
- RG 1.189, "Fire Protection for Operating Nuclear Power Plants."
- RG 1.190, "Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence."
- RG 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM [Operation and Maintenance] Code."
- RG 4.15, "Quality Assurance for Radiological Monitoring Programs (Normal Operations) Effluent Streams and the Environment."
- RG 8.2, "Guide for Administrative Practices in Radiation Monitoring," February 1973.
- RG 8.7, "Instructions for Recording and Reporting Occupational Radiation Exposure Data," (Revision 1) June 1992.
- RG 8.8, "Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations Will Be As Low As Is Reasonably Achievable," (Revision 3) June 1978.
- RG 8.9, "Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program," (Revision 1) July 1993.
- RG 8.10, "Operating Philosophy for Maintaining Occupational Radiation Exposures As Low As Is Reasonably Achievable."
- RG 8.13, "Instruction Concerning Prenatal Radiation Exposure, " (Revision 3) June 1999.
- RG 8.15, "Acceptable Programs for Respiratory Protection," (Revision 1) October 1999.
- RG 8.19, "Occupational Radiation Dose Assessment in Light-Water Reactor Power Plants -- Design Stage Man-Rem Estimates," (Revision 1) June 1979.
- RG 8.20, "Applications of Bioassay for I-125 and I-131," April 1978, (Revision 1) September 1979.
- RG 8.25, "Calibration and Error Limits of Air Sampling Instruments for Total Volume of Air Sampled," August 1980, (Revision 1) June 1992.

Appendix B

RG 8.26, "Applications of Bioassay for Fission and Activation Products," September 1980.

RG 8.27, "Radiation Protection Training for Personnel at Light-Water-Cooled Nuclear Power Plants," March 1981.

RG 8.28, "Audible-Alarm Dosimeters," August 1981.

RG 8.29, "Instructions Concerning Risks From Occupational Radiation Exposure," (Revision 1) February 1996.

RG 8.34, "Monitoring Criteria and Methods to Calculate Occupational Radiation Doses," July 1992.

RG 8.35, "Planned Special Exposures," June 1992.

RG 8.36, "Radiation Dose to the Embryo/Fetus," July 1992.

RG 8.38, "Control of Access to High and Very High Radiation Areas in Nuclear Power Plants," June 1993.

Safety Evaluation Reports

EPRI ALWR Utility Requirements Document for Passive Plants

WASH-1300, "Technical Basis for Interim Regional Tornado Criteria," May 1974.

Westinghouse Electric Corporation

APP-1000-S2C-009, Revision 0 - IRWST Seismic Sloshing and Wall Flexibility (IRWST)

APP-1100-S2C-034, Revision 1 - Finite Element Shell Model of Containment Internal Structures (CIS)

APP-1100-SCS-001, Revision 0 - Static Analysis of CIS - Dead Load and Live Load

APP-1100-SCS-002, Revision 1 - Static Analysis - Seismic Equivalent Accelerations

APP-1100-SCS-003, Revision 1 - Static Analysis - Pressures

APP-1100-SCS-004, Revision 0 - Temperature Distribution Through Wall

APP-1100-SCS-005, Revision 1 - Static Analysis - Thermal Analyses

APP-1100-SCS-006, Revision 1 - Static Analysis - Load Combinations

APP-1100-SCS-007, Revision 0 - Require Steel Area Calculations of Main IRWST Concrete Filled Module Walls

APP-1100-S2C-008, Revision 0 - IRWST Steel Wall and Main Operating Floor Columns Verification

- APP-1200-S2C-001, Revision 0 Three Dimensional Finite Element ASB Static Analyses
- APP-1200-S2C-002, Revision 0 ASB Exterior Walls Thermal and Earth Pressure Analyses
- APP-1200-S2C-106, Revision 1 Wall 1 (Analysis Results)
- APP-1200-CCC-106, Revision 0 Wall 1 (Design Calculation)
- APP-1200-CCC-102, Revision 0 Wall 7.3 (Design Calculation)
- APP-1277-S3C-006, Revision 2 Shield Building Roof (Design Calculation)
- APP-GW-S1-009, Revision 0 Design Guide for Thermal Effects on Concrete Structures
- APP-SSAR-GSC-529, Revision 0 AP1000 MSIV Compartment Temperature Response Following MSLB in Support of the Equipment Qualification
- ---, Letter, May 23, 1997, NSD-NRC-97-5152, "AP600 Design Changes to Address Post 72-Hour Actions," Attachment 2 Description of method to account for circumferential (2-dimensional) conduction through the steel containment shell for containment pressure analyses.
- ---, Letter, December 17, 1997, NSD-NRC-97-5492, "Presentation Material for December 9, 10, 11 and 12, 1997 ACRS, Meeting."
- ---, WCAP-78-P-A, "The Panda Code," February 1975.
- ---, WCAP-7308-L-P-A, "Evaluation of Nuclear Hot Channel Factor Uncertainties," June 1988.
- ---, WCAP-7588, Revision 1-A, "An Evaluation of the Rod Ejection Accident in Westinghouse Pressurized Water Reactors Using Spatial Kinetics Methods." January 1975.
- ---, WCAP-8370, "Westinghouse Energy Systems Business Unit/Power Generation Business Unit Quality Assurance Plan."
- ---, WCAP-8822, "Mass and Energy Releases Following A Steamline Rupture," September 1976. (Proprietary).
- ---, WCAP-8822-S1-P-A, "Mass and Energy Releases Following A Steamline Rupture," January 1985.
- ---, WCAP-9401-P-A, "Verification, Testing, and Analysis of the 17x17 Optimized Fuel Assembly," August 1981.
- ---, WCAP-10054-P-A (Proprietary), Addendum 1, "Addendum to the Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code for the Combustion Engineering NSSS," March 1987.
- ---, WCAP-10079-A (Proprietary), "NOTRUMP A Nodal Transient Small Break and general Network Code," August 1985.

- ---, WCAP-10081-A (Non -Proprietary), Addendum 1, "Addendum to the Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code for the Combustion Engineering NSSS," March 1987.
- ---, WCAP-10125-P-A, "Extended Burnup Evaluation of Westinghouse Fuels," December 1985
- ---, WCAP-10271-P-A, "Evaluation of Surveillance Frequencies & Out of Service Times for Engineered Safety Features Actuation Systems," Supplement 2, Revision 1, June 1990.
- ---, WCAP-10325-P-A, "Westinghouse LOCA Mass and Energy Release Data for Containment Design March 1979," May 1983.
- ---, WCAP-10326-A (Non-proprietary), "Westinghouse LOCA Mass and Energy Release Data for Containment Design March 1979," May 1983.
- ---, WCAP-10444-P-A, " Reference Core Report VANTAGE 5 Fuel Assembly," September 1985.
- —,WCAP-10698-P-A, "SGTR Analysis Methodology to Determine the Margin to Steam Generator Overfill," August 1985.
- —, WCAP-10698-P-A, Supplement 1, "Evaluation of Offsite Radiation Doses for a Steam Generator Tube Rupture Accident," March 1986.
- —, WCAP-10750-A (Non-Proprietary), "SGTR Analysis Methodology to Determine the Margin to Steam Generator Overfill," August 1985.
- —, WCAP-10750-A (Non-Proprietary), Supplement 1, "Evaluation of Offsite Radiation Doses for a Steam Generator Tube Rupture Accident," March 1986.
- ---, WCAP-11397-P-A, "Revised Thermal Design Procedure." April 1989.
- ---, WCAP-12488, "Westinghouse Fuel Criteria Evaluation Process," April 1990.
- ---, WCAP-12600, "AP600 Advanced Light Water Reactor Design Quality Assurance Program Plan (QAPP)," (Revision 4) January 1998.
- ---, WCAP-12600, Revision 4, "AP600 Quality Assurance Program Plan," January 26, 1998.
- ---, WCAP-12980, Revision 3, "AP600 Passive Residual Heat Removal Heat Exchanger Test Final Report," April 1997.
- ---, WCAP-13323-P and WCAP-13324-NP, "Phase II Wind Tunnel Testing for the Westinghouse AP600 Reactor," June 1992.
- ---, WCAP-13589-A, "Assessment of Clad Flattening and Densification Power Spike Factor Elimination in Westinghouse Nuclear Fuel," March 1995.
- ---, WCAP-13891, "AP600 Automatic Depressurization System Phase A Test Data Report," December 1993.

- ---, WCAP-13914, Revision 1, "Framework for AP600 Severe Accident Management Guidance (SAMG)," November 1996.
- ---, WCAP-13914, Revision 3, "Framework for AP600 Severe Accident Management Guidance (SAMG)," January 15, 1998.
- ---, WCAP-13963, Revision 1, "Scaling Logic for the Core Makeup Tank Test," January 1995.
- —, WCAP-14040-NP-A, "Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves,"
- ---, WCAP-14068, "Phase IVa Wind Tunnel Testing for the Westinghouse AP600 Reactor," June 1994.
- ---, WCAP-14169-P "Phase IVA Wind Tunnel Testing for the Westinghouse AP600 Reactor, Supplemental Report," September 1994.
- ---, WCAP-14171 "WCOBRA/TRAC Applicability to AP600 Large Break Loss-of-coolant Accident," Revision 2, March 24, 1998.
- ---, WCAP-14206, "Applicability of NOTRUMP Computer Code to AP600 SSAR Small Break LOCA Analyses," November 1994.
- ---, WCAP-14234, "LOFTRAN & LOFTTR2 AP600 Code Applicability Document," November 1984, (Revision 1) June 1997, August 1997.
- ---, WCAP-14307, Revision 1, "AP600 LOFTRAN-AP and LOFTTR2-AP Final Verification and Validation Report," August 1997.
- ---, WCAP-14382, "WGOTHIC Code Description and Validation," M. Kennedy, et. al., May 1995.
- ---, WCAP-14407, Revision 3, "WGOTHIC Application to AP600," J. Woodcock, et. al., April 1998.
- ---, WCAP-14425, "Evaluation of the AP600 Conformance to Inter-System Loss-of-Coolant Accident Acceptance Criteria," July 1995.
- ---, WCAP-14565-P-A, "VIPRE-01 Modeling and Qualification for Pressurized Water Reactor Non-LOCA Thermal-Hydraulic Safety Analysis," October 1999.
- ---, WCAP-14605, "Westinghouse Setpoint Methodology for AP600 Protection Systems."
- ---, WCAP-14690, "Designer's Input To Procedure Development for the AP600," Revision 1, issued June 1997.
- ---, WCAP-14727, "AP600 Scaling and PIRT Closure Report," Revision 2, February 1998.
- ---, WCAP-14776, Revision 3, "WCOBRA/TRAC OSU Long-Term Cooling Final Validation Report," May 1997.

- ---, WCAP-14800 "AP600 PRA Thermal/Hydraulic Uncertainty Evaluation for Passive System Reliability," dated June 1997.
- ---, WCAP-14807, Revision 5, "NOTRUMP Final Validation Report for AP600," August 1998.
- ---, WCAP-14837, Revision 3, "Shutdown Evaluation Report," March 1998
- ---, WCAP-14869, "MAAP4/NOTRUMP Benchmarking to Support the Use of MAAP4 for the AP600 PRA Success Criteria Analyses."
- --, WCAP-14967, "Assessment of Effects of <u>W</u>GOTHIC Solver Upgrade from Version 1.2 to 4.1," September 1997.
- ---, WCAP-15063-P-A, "Westinghouse Improved Performance Analysis and Design Model (PAD 4.0)," Revision 1, July 2000.
- —, WCAP-15315, "Reactor Vessel Closure Head/Vessel Flange Requirements Evaluation for Operating PWR and BWR [boiling water reactor] Plants."
- —, WCAP-15612, "AP1000 Plant Description & Analysis Report," December 2000.
- —, WCAP-15613, "AP1000 PIRT and Scaling Assessment," February 2001.
- —, WCAP-15644, "AP1000 Code Applicability Report," April 27, 2001.
- ---, WCAP-15775, Rev. 1, "AP1000 Instrumentation and Control Defense-in-Depth and Diversity Report".
- ---, WCAP-15783, "Analysis of the Probability of the Generation of Missiles from Fully Integral Nuclear Low Pressure Turbines".
- ---, WCAP-15785, "Probabilistic Evaluation of Turbine Valve Test Frequency".
- ---, WCAP-15799, "AP1000 Conformance with SRP Acceptance Criteria".
- ---, WCAP-15800, "Operational Assessment for AP1000," issued December 2002.
- —, WCAP-15833-P, Revision 2, "WCOBRA/TRAC AP1000 ADS-4/IRWST Phase Modeling," December 2002.
- ---, WCAP-15846, Revision 0, "WGOTHIC Application to AP600 and AP1000," April 2002.
- ---, WCAP-15871, "AP1000 Assessment Against NFPA 804," December 2000.
- ---, WCAP-15927, Rev. 0, "Design Process for AP1000 Common Q Safety Systems".
- ---, WCAP-15985, "AP1000 Implementation of the Regulatory Treatment of Nonsafety-Related Systems Process," Revision 1, April 2003
- ---, WCAP-15992, "AP1000 Adverse System Interactions Evaluation Report," Revision 1 February 2003.

- —, WCAP-15993, "Evaluation of the AP1000 Conformance to Inter-System Loss-of-Coolant Accident Acceptance Criteria," issued November 2002
- —, WCAP-15994-P, Revision 0, "Structural Analysis for the AP1000 Reactor Coolant Pump High Inertia Flywheel," (November 2002).
- —, WCAP-15994-P, Revision 1, "Structural Analysis for the AP1000 Reactor Coolant Pump High Inertia Flywheel."
- ---, WCAP-8077 "Ice Condenser Containment Pressure Transient Analysis Methods,", March, 1973 (Proprietary).
- ---, WCAP-8078 "Ice Condenser Containment Pressure Transient Analysis Methods," (Non-Proprietary).
- ---, WCAP-8264 "Westinghouse Mass and Energy Release Data for Containment Design," Shepard, R. M., et al., WCAP-8264-P-A, June 1975 (Proprietary).
- ---, WCAP-8312-A, Revision 2, August 1975 (Non-Proprietary)

Other References

Uniform Plumbing Code Section 318, issued 2000.

EPRI advanced light water reactor (ALWR) utility requirements document (URD), Volume III

- M.M. Corletti, "Westinghouse Responses to Requests for Additional Information Related to Pre-Certification Review of the AP1000," (Proprietary and Non-Proprietary), <u>W</u> letter DCP/NRC1484, September 12, 2001.
- M.M. Corletti, "AP1000 Pre-Application Review— Acceptance Review of Codes Submission and Responses to Requests for Additional Information Pertaining to the AP1000 Pre-Certification Review," W letter DCP/NRC1481, July 31, 2001.
- V.V. Palazov and L.W. Ward, "Preliminary Results of the AP1000 RELAP5/MOD3.3 Analysis for the Two-Inch Cold Leg and Main Steamline Breaks," ISL-NSAD-NRC-01-003, Information Systems Laboratories, Inc., August 2001.
- K.H. Ardron and W.M. Bryce, "Assessment of Horizontal Stratification Entrainment Model in RELAP5/MOD2 by Comparison with Separate Effects Experiments," *Nuclear Engineering and Design* 122, pp. 263—271, 1990.
- Hsu-Chieh Yeh and L.E. Hochreiter, "Mass Effluence During FLECHT Forced Reflood Experiments," *Nuclear Engineering and Design* 60, pp. 413—429, 1980.
- W. Seeger, et al., "Two-Phase Flow in a T-Junction with a Horizontal Inlet, Part I: Phase Separation," Int. J. Multiple Flow, Vol. 12, No. 4, pp. 575—585, 1986.
- Y. Taitel and A.E. Dukler, "A Model for Predicting Flow Regime Transitions in Horizontal and Near Horizontal Gas-Liquid Flow," *AIChE Journal*, Vol. 22, No. 1, P. 47—55, January 1976.

Appendix B

NRC Letter from C. Grimes to D. Walters, May 19, 2003, ML003717179, License Renewal Issue No. 98-0030, "Thermal Aging Embrittlement of Cast Austenitic Stainless Steel Components."