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MFN 07-504

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Subject: **Response to Portion of NRC Request for Additional Information Letter No. 100 – Related to ESBWR Design Certification Application – RAI Numbers 20.0-9 and 20.0-10**

Enclosures 1 and 2 contain GEH's response to the subject NRC RAIs transmitted via the Reference 1 letter.

If you have any questions or require additional information regarding the information provided here, please contact me.

Sincerely,

Kathy Sedney for

James C. Kinsey
Project Manager, ESBWR Licensing

D068
NRO

Reference:

MFN 07-327, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 100 Related to the ESBWR Design Certification Application*, May 30, 2007.

Enclosures:

1. MFN 07-504 – Response to Portion of NRC Request for Additional Information Letter No. 100 – Related to ESBWR Design Certification Application – RAI Numbers 20.0-9 and 20.0-10
2. MFN 07-504 – Response to Portion of NRC Request for Additional Information Letter No. 100 – Related to ESBWR Design Certification Application – RAI Numbers 20.0-9 and 20.0-10 – DCD Tier 2 Markup Pages

cc:

AE Cubbage	USNRC (with enclosures)
DH Hinds	GEH Wilmington (with enclosures)
RE Brown	GEH Wilmington (with enclosures)
eDRF	73-5508

Enclosure 1

MFN 07-504

Response to Portion of NRC Request for

Additional Information Letter No. 100

Related to ESBWR Design Certification Application

RAI Numbers 20.0-9 and 20.0-10

NRC RAI 20.0-9

DCD Tier 2, Rev 3, Appendix 1C indicates that the COL Holder or COL applicant/holder will address certain Generic Issues discussed in NRC Bulletins (BL) and Generic Letters (GLs), specifically BL 80-08, BL 81-01, GL 80-113, GL 81-07, GL 89-04, GL 89-13 S1, GL 90-09, and GL 96-05. GE should revise the DCD to specify that the COL Applicant will confirm that these Generic Issues are addressed.

GEH Response

For DCD Rev 4, all COL items will be eliminated from Appendix 1C because they duplicate COL commitments made elsewhere in the DCD. This proposed approach was discussed with the NRC during a DCWG meeting held on June 13, 2007 and the conclusion from that meeting was that this approach is acceptable.

Thus, DCD Tier 2 Tables 1C-1 and 1C-2 will be modified as shown in the attached DCD markup to reference the appropriate DCD location where a discussion of the topic and/or any applicable COL Applicant commitments related to the GLs and BLs mentioned in this RAI can be found.

Due to further study of the situation and some confusion about the intent of the COL action in GL 89-13 S1 as written in DCD Rev 3, the evaluation result sections for GL 89-13 and 89-13 S1 will be revised in Rev 4 to clarify why GL 89-13 and its supplement do not apply to the ESBWR design. A COL Applicant action is no longer required for this GL because water quality requirements are imposed on the long-term IC/PCC pool and spent fuel pool makeup source in DCD Section 9.2.5 to ensure acceptable quality water is used for this safety function.

DCD Impact

DCD Tier 2, Tables 1C-1 and 1C-2 will be revised as noted in the attached markup for the GLs and BLs mentioned in this RAI.

NRC RAI 20.0-10

DCD Tier 2, Rev 3, Appendix 1C indicates that certain Generic Issues are not applicable because they are administrative, maintenance, or procurement communications. These include BL 85-03 and its supplement, GL 89-10 and its supplements, GL 91-15, and GL 95-07. GE should revise the DCD to specify that the COL Applicant will confirm that these Generic Issues are addressed. GE should also review other GL and BL responses in the DCD, and indicate those that need to be addressed by the COL Applicant rather than being identified as not applicable.

GEH Response

These GLs and BLs were reclassified as not applicable in DCD Rev 3 based on exclusion codes defined in NRC Draft Guide DG-1145, Section C.IV.8.

Consistent with the response to RAI 20.0-9, the discussion for the GLs and BLs mentioned in this RAI will be modified as needed to refer to other DCD sections where the subject matter is addressed (and where any COL items should be identified) rather than by adding COL Applicant items to summary Tables 1C-1 and 1C-2. The items mentioned specifically in the RAI will be modified to remove the "Not Applicable" statement and will be addressed as follows:

- GL 89-10 and its supplements – Revised to refer to Tier 2 Subsections 3.9.6 and 3.9.6.1;
- GL 91-15 – Solenoid-Operated Valve Problems – Revised to refer to Tier 2 Subsection 3.9.6.1;
- GL 95-07 – No change other than to delete the "Not Applicable. It is a procurement communication." portion of the response to this item. The existing discussion already references Subsection 3.9.6 and GL 89-10 Supplement 6.; and
- BL 85-03 – Revised listing for both BL 85-03 and BL 85-03 Supplement 1 to refer to Tier 2 Subsection 3.9.6.1.

A review of the changes made from DCD Rev 2 to Rev 3 indicates the following additional GLs and BLs were modified to include a "Not Applicable" statement based on exclusion codes defined in NRC Draft Guide DG-1145, Section C.IV.8.

- GL 81-38 – Reverting back to Rev 2 description and reference to Section 11.4 for further discussion of the issue;
- GL 83-07 – Assessment will be revised to read: "The requirements of this generic letter have been incorporated into CFR or other SRP requirements." consistent with DG-1145, Section C.IV.8;
- GL 85-01 – Reverting back to Rev 2 description, which references Section 9.5.1 and Appendices 9A and 9B;
- GL 88-16 – Reverting back to Rev 2 description, which references Subsection 16.5.6.3;
- GL 88-18 – Adding reference to Section 17.2 (QA program during construction and operation);

- GL 89-01 – Deleting "Not applicable" statement. References to 16.5.5.1 and 16.5.5.3 are judged to be sufficient;
- GL 89-02 – Replacing assessment with the following: "Addressed as part of Quality Assurance Program for Operations. See Section 17.2";
- GL 89-07 and supplement – Replacing "Not applicable" statement with reference to Section 13.6;
- GL 89-14 – Reverting back to Rev 2 description, which references Section 16.3;
- GL 89-15 – Replacing "Not applicable" statement with reference to Section 13.3;
- GL 91-03 – Replacing "Not applicable" statement with reference to Section 13.6;
- GL 91-04 – Deleting "Not Applicable. Is an administrative communication". Reference to Tech Specs is sufficient.
- GL 91-05 – Replacing assessment with the following: "Addressed as part of Quality Assurance Program for Operations. See Section 17.2";
- GL 91-14 – Replacing "Not applicable" statement with reference to Subsection 9.5.2.2;
- GL 91-16 – Replacing "Not applicable" statement with reference to Section 13.6;
- GL 91-17 – Replaced "Not applicable" statement with "Refer to Subsection 3.9.3, ASME Code Class 1, 2 and 3 Components, Component Supports and Core Support Structures for further details. Addressed as part of the design, material selection, procurement, fabrication and maintenance processes for bolted connections.";
- GL 99-02 – Replacing "Not Applicable. Is a procedural/verification communication. Subsection 9.4.1" with a reference to Chapter 16, Section 5.5.13.c., where the ASTM standard that is the subject of the GL is incorporated in the ESBWR Tech Specs;
- BL 80-15 – Replaced "Not Applicable. Is an administrative communication." with reference to Subsection 9.5.2.2;
- BL 87-02 and supplements – Replaced "Not applicable" statement with "Addressed as part of Quality Assurance Program for Operations. See Section 17.2". In addition, the reference to IN 88-17 as past-related correspondence was relocated from BL 87-02 Supp 1 to BL 87-01;
- BL 96-02 – Deleting "Not applicable" statement. Reference to Section 9.1.5 is sufficient; and
- BL 96-04 – Deleting "Not applicable" statement and changing statement to read: "Related to dry cask storage, which is not part of the ESBWR Standard Plant design."

DCD Impact

DCD Tier 2, Tables 1C-1 and 1C-2 will be revised as noted in the attached markup for the above-mentioned entries.

Enclosure 2

MFN 07-504

Response to Portion of NRC Request for

Additional Information Letter No. 100

Related to ESBWR Design Certification Application

RAI Numbers 20.0-9 and 20.0-10

DCD Tier 2 Markup Pages

APPENDIX 1C INDUSTRY OPERATING EXPERIENCE

1C.1 EVALUATION

Industry operating experience information is routinely made available to and/or distributed by GEH design and modifications personnel. The more important industry-wide issues are routinely addressed in NRC Generic Letters and Bulletins.

All of the Generic Letters and Bulletins covering January 1, 1980 through February 24, 2005 were reviewed. Of those, the Generic Letters and Bulletins that are potentially applicable to the ESBWR design or operations are addressed in Tables 1C-1 and 1C-2, respectively. For each of those Generic Letters and Bulletins, Tables 1C-1 and 1C-2 provide ~~(a) the Tier 2~~ location(s) where the Generic Letter's or Bulletin's topic is addressed~~,~~ or ~~(b)~~ a summary conclusion of its effect on the ESBWR~~, or (c) notes that it is applicable to the COL applicant/holder. (See Subsection 1.9.4 for COL information.)~~. Generic Letter and Bulletin topics deemed not applicable to the ESBWR design or operations (topics pertaining to other reactor types or BWR design features, e.g., a Reactor Recirculation Pump issue) are generally not included in Tables 1C-1 and 1C-2. Also, Generic Letter and Bulletin topics related to identified regulatory or industry developed resolutions are not included in Tables 1C-1 and 1C-2, to avoid repetition ~~within Tier 2~~.

Selected Generic Letters and Bulletins are noted as being within the scope of the COL applicant as indicated below in Section 1C.2 and in Tables 1C-1 and 1C-2.

1C.2 COL INFORMATION

1C.1-1-A Handling of Safeguards Information

COL Applicant will address requirements of Generic Letter 82-39 regarding the handling of safeguards information. (Table 1C-1, No. 82-39)

1C.1-2-A Emergency Preparedness and Response Actions

COL Applicant will address requirements of IE Bulletin 2005-02 regarding emergency preparedness and response actions for security-based events. (Table 1C-2, No. 2005-02)

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
80-30	4/10/80	Clarification of the Term "Operable" as it Applies to Single Failure Criterion for Safety Systems Required by TS	Chapter 16
80-34	4/25/80	Clarification of NRC Requirements for Emergency Response Facilities at Each Site	The ESBWR includes provisions for a Technical Support Center (TSC). The Operational Support Center (OSC) and Emergency Operating Facility (EOF) are described in Section 13.3.
80-110	12/15/80	Periodic Updating of Final Safety Analysis Reports (FSARs)	Not Applicable. Is an administrative communication.
80-113	12/22/80	Control of Heavy Loads	Subsection 9.1.5~~-with COL Holder to supplement~~. See also Section 1.11 (Item A-36).
81-03	2/26/81	Implementation of NUREG-0313, Rev. 1	Subsection 5.2.3
81-04	2/25/81	Emergency Procedures and Training for Station Blackout Events	The ESBWR does not require emergency AC power to achieve safe shutdown. Therefore, this issue is not applicable to the ESBWR Standard Plant design. See Section 1.11 (Item A-44) and Subsection 15.5.5.
81-07	2/3/81	Control of Heavy Loads	Subsection 9.1.5~~-with COL Holder to supplement~~. See also Section 1.11 (Item A-36).
81-10	2/18/81	Post-TMI Requirements for the Emergency Operations Facility	See response to GL 80-34.
81-11	2/22/81	Comments on NUREG-0619	Not applicable. The ESBWR does not include a CRD return nozzle on the RPV.
81-20	4/1/81	Safety Concerns Associated with Pipe Breaks in the BWR Scram System	Not applicable. The ESBWR utilizes FMCRDs and does not have CRD withdraw lines and scram discharge volume.
81-37	12/29/81	ODYN Code Reanalysis Requirements	Not applicable, ESBWR does not use the ODYN Code

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
81-38	11/10/81	Storage of Low-Level Radioactive Wastes at Power Reactor Sites	~~Not Applicable. Is an administrative communication.~~ The Radwaste Building includes space for processing and storage of low level waste. Storage space is provided for 6 months worth of waste. Section 11.4
82-09	4/20/82	Environmental Qualification of Safety-Related Electrical Equipment	Section 3.11
82-21	10/6/82	Technical Specifications for Fire Protection Audits	Not applicable. No longer controlled by Technical Specifications.
82-23	10/30/82	Inconsistency Between Requirements of 10CFR73.40(d) and Standard Technical Specifications for Performing Audits of Safeguard Contingency Plans	Not applicable. No longer controlled by Technical Specifications.
82-27	11/15/82	Transmittal of NUREG-0763, "Guidelines for Confirmatory In-Plant Tests of Safety-Relief Valve Discharges for BWR Plants," and NUREG-0783, "Suppression Pool Temperature Limits for BWR Containments."	The suppression pool is provided with sufficient temperature instrumentation to monitor the temperature rise during testing that adds heat to the pool. The Tech Spec limits on pool temperature are established in accordance with the applicable design limits. Subsection 7.2.3.
82-33	12/17/82	Supplement 1 to NUREG-0737	These requirements have been incorporated into Reg. Guide 1.97 and the ESBWR conforms with this Reg. Guide. Appendix 1A
82-39	12/22/82	Problems with the Submittals of 10 CFR 73.21 Safeguards Information Licensing Review	Not Applicable. Is an administrative communication. GEH has an approved procedure for handling Safeguards Information including how to mail such information to authorized recipients. COL Applicant will address requirements of Generic Letter 82-39 regarding the handling of safeguards information. (Section 1C.2, Item 1C.1-1-A)

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
83-05	2/8/83	Safety Evaluation of "Emergency Procedure Guidelines," Revision 2, NEDO-24934, June 1982	~~Appendix 18A~~See Section 18.9 for a discussion of Emergency Operating Procedures development. Revision 2 of the Emergency Procedure Guidelines has been superceded by newer revisions.
83-07	2/16/83	The Nuclear Waste Policy Act of 1982	~~Not Applicable. Is an administrative communication.~~ The requirements of this generic letter have been incorporated into CFR or other SRP requirements.
83-13	3/2/83	Clarification of Surveillance Requirements for HEPA Filters and Charcoal Absorber Units in Standard Technical Specifications on ESF Cleanup Systems	Subsection 9.4.1
83-28	7/8/83	Required Actions Based on Generic Implications of Salem ATWS Events	Superseded by 10 CFR 50.62, see Section 15.5 for the ATWS event evaluation
83-33	10/19/83	NRC Positions on Certain Requirements of Appendix R to 10 CFR 50	Subsection 9.5.1 and Appendices 9A and 9B
84-15	7/2/84	Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability	Not applicable, the ESBWR does not have/need emergency diesel generators.
84-23	10/26/84	Reactor Vessel/Water Level Instrumentation in BWRs	Subsection 7.7.1
85-01	1/9/85	Fire Protection Policy Steering Committee Report	~~Not Applicable. Is an administrative communication.~~ Subsection 9.5.1 and Appendices 9A and 9B
85-06	1/16/85	Quality Assurance Guidance for ATWS Equipment that is not Safety-Related	Table 17.0-1.
86-10	4/24/86	Implementation of Fire Protection Requirements	Subsection 9.5.1 and Appendices 9A and 9B
86-10s1	3/25/1994	Fire Endurance Test Acceptance Criteria for Fire Barrier Systems Used to Separate Redundant Safe Shutdown Trains Within the Same Fire Area	Subsection 9.5.1 and Appendices 9A and 9B

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
87-06	3/13/87	Periodic Verification of Leak Tight Integrity of Pressure Isolation Valves	Not applicable.~~,~~ ~~a~~As described ~~defined~~ in Appendix 3K~~Section B3.4.6 of NUREG-1434~~, the ESBWR does not need ~~nor~~ have pressure isolation valves between the reactor coolant pressure boundary and a low pressure piping system.~~.~~
87-09	6/4/87	Sections 3.0 and 4.0 of the Standard Technical Specifications (STS) on the Applicability of Limiting Conditions for Operations and Surveillance Requirements	Chapter 16 TS Section 3.0, consistent with current Standard Technical Specifications (NUREG-1434, Rev. 3.1~~0~~).
88-01	1/25/88	NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping	Subsection 5.2.3.4 and Chapter 16 Bases B3.4.2
88-14	8/8/88	Instrument Air Supply System Problems Affecting Safety-Related Equipment Past Related Correspondence: IE Notice 87-28, Supp. 1 NUREG-1275, Volume 2	Subsection 9.3.6
88-15	9/12/88	Electric Power Systems — Inadequate Control Over Design Process Past Related Correspondence: IE Notice 88-45	Most of the issues described in GL88-15 are not applicable to the ESBWR. Section 8.3
88-16	10/4/88	Removal of Cycle-Specific Parameter Limits from Technical Specifications	~~Not Applicable. Is an administrative communication.~~ Consistent with current Standard Technical Specifications (NUREG-1434, Rev. 3.1~~0~~). Subsection 16.5.6.3
88-18	10/20/88	Plant Record Storage on Optical Disks Past Related Correspondence: NUREG-0800 Reg. Guide 1.28, Rev. 3	This generic letter is not involved with operational experience, so no evaluation is required. Section 17.2
88-20	11/23/88	Individual Plant Examination for Severe Accident Vulnerabilities-10 CFR Para. 50.54(f)	Chapter 19

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
88-20s1	8/29/89	Initiation of the Individual Plant Examination for Severe Accident Vulnerabilities-10 CFR Para. 50.54(f)	Chapter 19
88-20s2	4/4/90	Accident Management Strategies for Consideration in the Individual Plant Examination Process	Chapter 19
88-20s3	7/6/90	Completion of Containment Performance Improvement Program and Forwarding of Insights for Use in the Individual Plant Examination for Severe Accident Vulnerabilities	Chapter 19
88-20s4	6/28/91	Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities - 10 CFR 50.54(f)	Chapter 19
88-20s5	9/8/95	Individual Plant Examination of External Events for Severe Accident Vulnerabilities	Chapter 19
89-01	1/31/89	Implementation of Programmatic Controls for Radiological Effluent Technical Specifications in the Administrative Controls Section of the Technical Specifications and the Relocation of Procedural Details of RETS to the Offsite Dose Calculation Manual or to the Process Control Program	~~Not Applicable. Is an administrative communication.~~ Consistent with current Standard Technical Specifications (NUREG-1434, Rev. 3.1~~0~~). Subsections 16.5.5.1 and 16.5.5.3.
89-02	3/21/89	Actions to Improve the Detection of Counterfeit and Fraudulently Marketed Products Past Related Correspondence: EPRI-NP-5652, "Guideline for the Utilization of Commercial-Grade Items in Nuclear Safety-Related Applications." Bulletins 87-02 and Supplements 1 and 2, 88-05 and Supplements 1 and 2, 88-10 IE Notices 87-66, 88-19, 88-35, 88-46 and Supplements 1 and 2, 88-48 and Supplement 1, 88-97	Addressed as part of Quality Assurance Program for Operations~~Not Applicable. Is a procurement communication~~. See Section 17.2
89-04	4/3/89	Guidance on Developing Acceptable Inservice Testing Program	~~COL Holder to supplement~~ GL 89-04 only applies to pumps and valves. See Subsections 3.9.6~~, 5.2.4, 6.3.3.9, and 6.6~~

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
89-04s1	4/4/95	Guidance on Developing Acceptable Inservice Testing Programs	Subsection 3.9.6~~5.2.4 and Section 6.6~~
89-06	4/12/89	Task Action Plan Item I.D.2 – Safety Parameter Display System 10 CFR 50.34(f)	Appendix 1A and Chapter 18
89-07	4/28/89	Power Reactor Safeguards Contingency Planning for Surface Vehicle Bombs	Section 13.6~~Not Applicable. Is an administrative and procedural communication.~~
89-07 Supp 1	4/21/89	Power Reactor Safeguards Contingency Planning for Surface Vehicle Bombs	Section 13.6~~Not Applicable. Is an administrative and procedural communication.~~
89-08	5/2/89	Erosion/Corrosion-Induced Pipe Wall Thinning	Subsections 6.6.7 and 10.3.6
89-10	6/28/89	Safety-Related Motor-Operated Valve Testing and Surveillance	Subsections 3.9.6 and 3.9.6.1~~Not Applicable. Is a maintenance communication.~~
89-10s1	6/13/90	Results of Public Workshop	Subsections 3.9.6 and 3.9.6.1~~Not Applicable. Is a maintenance communication.~~
89-10s3	10/25/90	Consideration of the Results of NRC Sponsored Tests of Motor-Operated Valves	Subsections 3.9.6 and 3.9.6.1~~Not Applicable. Is a maintenance communication.~~
89-10s4	2/12/92	Consideration of Valve Mispositioning in Boiling Water Reactors	Subsections 3.9.6 and 3.9.6.1~~Not Applicable. Is a maintenance communication.~~
89-10s5	6/28/93	Inaccuracy of Motor-Operated Valve Diagnostic Equipment	Subsections 3.9.6 and 3.9.6.1~~Not Applicable. Is a maintenance communication.~~
89-10s6	3/8/94	Information on Schedule and Grouping, and Staff Responses to Additional Public Questions	Subsections 3.9.6 and 3.9.6.1~~Not Applicable. Is a maintenance communication.~~
89-13	7/18/89	Service Water System Problems Affecting Safety-Related Equipment	Not applicable. ESBWR has no safety-related service water and applies water quality standards to the use of water for safety functions. As indicated in Subsection 9.2.5, long-term makeup water for the IC/PCC and spent fuel pools is required to meet fire protection system water quality standards.

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
89-13s1	4/4/90	Service Water System Problems Affecting Safety-Related Equipment	Not applicable. ESBWR has no safety-related service water and makes no use of untreated water for safety functions. See above entry for GL 89-13.~~COL Applicant/Holder to address actions in Section II.D of Enclosure 1 for selected fire protection system makeup water source.~~
89-14	8/21/89	Line Item Improvements in Technical Specifications Removal of the 3.25 Limit on Extending Surveillance Intervals	~~Not Applicable. Is an administrative communication.~~ Consistent with current Standard Technical Specifications (NUREG-1434, Rev. 3.1~~0~~) Section 16.3
89-15	8/21/89	Emergency Response Data System	Section 13.3~~Not Applicable. Is an administrative communication.~~
89-16	9/1/89	Installation of a Hardened Wetwell Vent	The ESBWR does not need a dedicated Hardened Wetwell Vent, as discussed in Subsection 6.2.5.4. GL is addressed only to BWR plants with Mark I containments.
89-18	9/6/89	Resolution of USI A-17, Systems Interactions	Section 1.11 and 19
89-19	9/20/89	Request for Action Related to Resolution of Unresolved Safety Issue A-47, "Safety Implication of Control Systems in LWR Nuclear Power Plants", Pursuant to 10 CFR 50.54(f)	The ESBWR utilizes a common adjustable speed drive motor for both the FW and condensate booster pumps. Section 1.11, Subsection 7.7.3
89-22	10/19/89	Potential for Increased Roof Loads and Plant Area Flood Runoff Depth at Licensed Nuclear Power Plants Due to Recent Change in Probable Maximum Precipitation Criteria Developed By The National Weather Service	Section 2.3
90-09	12/11/90	Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions	~~COL Holder~~Subsection 3.9.3.7.1, Item (3)b
91-03	03/06/91	Reporting of Safeguards Events	Section 13.6~~Not Applicable. Is an administrative communication.~~

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
91-04	04/02/91	Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle	~~Not Applicable. Is an administrative communication.~~ Chapter 16 TS Sections 3.1-3.9 are already written to support 24-month fuel cycles.
91-05	04/04/91	Licensee Commercial Grade Procurement and Dedication Programs	~~Not Applicable. Is a procurement communication.~~Addressed as part of Quality Assurance Program for Operations. See Section 17.2
91-06	04/29/91	Resolution of Generic Issue A-30, "Adequacy of Safety-Related DC Power Supplies," Pursuant to 10 CFR 50.54(f)	Subsection 8.3.2 and Section 1.11 (Issues A-30 and 128). Operating and maintenance procedures developed in accordance with Subsection 13.5.2 and Section 18.9 ensure that the required tests are adequately addressed.
91-10	07/08/91	Explosive Searches at Protected Area Portals	Issue is Not Applicable to Commercial Nuclear Power Plants.
91-11	07/19/91	Resolution of Generic Issue 48, "LCOs for Class 1E Tie Breakers", Pursuant to 10 CFR 50.54(f)	Section 1.11 (Issues 48 and 128)
91-14	09/23/91	Emergency Telecommunications	Subsection 9.5.2.2~~Not Applicable. Is an administrative communication.~~
91-15	09/23/91	Operating Experience Feedback, Solenoid-Operated Valve Problems at U.S. Reactors	Subsection 3.9.6.1~~Not Applicable. Is a procurement and maintenance communication.~~
91-16	10/03/91	Licensed Operators' and Other Nuclear Facility Personnel Fitness for Duty	Section 13.6~~Not Applicable. Is an administrative communication.~~
91-17	10/17/91	Generic Safety Issue 29, "Bolting Degradation or Failure in Nuclear Power Plants"	~~Not Applicable. Is a procurement and maintenance communication.~~Refer to Subsection 3.9.3, ASME Code Class 1, 2 and 3 Components, Component Supports and Core Support Structures for further details. Addressed as part of the design, material selection, procurement, fabrication and maintenance processes for bolted connections. Section 1.11 (Issue 29)

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
92-01r1	03/06/92	Reactor Vessel Structural Integrity	Subsection 5.3.2 and 5.3.3
92-04	8/19/92	Resolution of the Issues Related to Reactor Vessel Level Instrumentation in BWRs Pursuant to 10 CFR 50.54(f)	The ESBWR includes a continuous purge of water to the reference leg to prevent the buildup of non-condensable gases. The CRD Hydraulics provides this flow. Subsections 4.6.1.2.4 and 7.7.1.2
92-08	12/17/92	Thermo-Lag 330-1 Fire Barriers Past Related Correspondence: IE Notices 92-01 and 92-01 Supplement 1.	~~Not Applicable. Is a procurement communication.~~This GL only applies to Thermo-Lag 330-1 fire barrier systems. The design intent for ESBWR is to provides strict physical separation between the redundant safety-related divisions ~~as required by Reg Guide 1.75~~. If it is determined that a fire-wrapping material is required in some locations, an alternative material qualified per the guidance of RG 1.189~~There is no need to use Thermo-Lag 330~~ will be used. Subsection 9.5.1, Section 17.2
93-05	9/27/93	Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation	Not Applicable. Is an administrative communication. Lessons from the Tech Spec Improvement programs have been factored into the proposed ESBWR Tech Specs. Chapter 16.
93-06	10/25/93	Research Results on Generic Safety Issue 106, "Piping and the Use of Highly Combustible Gases in Vital Areas"	The ESBWR only uses highly combustible gases in any safety-related area for reference gas in the H_2/O_2 monitors. This calibration gas is only used periodically and normally valved out of service. The H_2 bottles are located in a nonsafety-related structure. The lines to the H_2 monitors are very small and would limit the flow in the event of a break. Subsection 9.5.1 and Section 1.11 (Issue 106)
93-08	12/29/93	Relocation of Technical Specification Tables Of Instrument Response Time Limits	Not Applicable. Is an administrative communication.

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
94-01	5/31/94	Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators	Not Applicable. Is a maintenance communication. The ESBWR does not have safety-related emergency diesel generators. There are no surveillance requirements for the nonsafety-related diesel generators.
94-02	7/11/94	Long-Term Solutions and Upgrade of Interim Operating Recommendations for Thermal-Hydraulic Instabilities in BWRs	The ESBWR addresses the concerns of Thermal-Hydraulic Instability. Section 4.4 and Appendix 4D
94-03	7/25/94	Intergranular Stress Corrosion Cracking of Core Shrouds in Boiling Water Reactors	Controls on material properties and welding parameters are placed on all stainless material used in the RPV including the shroud. Subsection 5.2.3.4.1.
95-07	8/17/95	Pressure Locking and Thermal Binding of Safety-Related Power-Operated Gate Valves	~~Not Applicable. Is a procurement communication.~~ The number of safety-related valves in the ESBWR is much smaller than previous designs. The safety-related valves that need to open to perform their function are even smaller. Many of the safety-related valves that need to open are squib actuated and not subject to this phenomenon. Globe valves are generally used in the other applications. In any case, GL 89-10 Supplement 6 now covers this issue and the ESBWR complies with the guidance of this document. Subsection 3.9.6
96-01	1/10/96	Testing of Safety-Related Circuits	Plant procedures ~~will~~ ensure that ~~all portions of~~ the safety-related logic circuitry are adequately covered in the surveillance procedures as described in Generic Letter 96-01. Chapter 16.
96-03	1/31/96	NRC Generic Letter 96-03: Relocation of The Pressure Temperature Limit Curves And Low Temperature Overpressure Protection System Limits	Not Applicable. Is an administrative communication. Consistent with current Standard Technical Specifications (NUREG-1434, Rev. 3.1~~0~~) Chapter 16 TS, Subsection 5.6.4

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
96-04	6/26/96	Boraflex Degradation in Spent Fuel Pool Storage Racks	Not Applicable. Is a procurement communication. The equipment specification for the racks at the time of the order will be consistent with the latest regulatory guidance. Subsection 9.1.2
96-05	9/18/96	Periodic Verification of Design-Basis Capability of Safety-Related Power-Operated Valves	~~COL Holder to supplement~~ Subsection 3.9.6.1
96-06	9/30/96	Assurance of Equipment Operability And Containment Integrity During Design-Basis Accident Conditions	PCCS provides containment air cooling during design basis accidents as described in Subsections 6.2.1 and~~,~~ 6.2.2, and is not subject to water hammer effects. The Chilled Water System provides cooling water to the Drywell Cooling System during normal operation, and is isolated on a LOCA signal as discussed in Subsections 9.2.7.5 and 6.2.4.3.2.1. Fluid-filled piping associated with containment penetrations that automatically isolate during DBAs is designed in accordance with ASME Code Section III to accommodate thermal transient loadings as described in Subsection 3.9.3.4 and Table 3.9-2.
96-06s1	11/13/97	NRC Generic Letter 96-06, Supplement 1: Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions	Subsections 6.2.1, 6.2.2 and 6.2.4.3.2.1 and 9.2.7.5.
97-04	10/7/97	NRC Generic Letter 97-04: Assurance of Sufficient Net Positive Suction Head for Emergency Core Cooling and Containment Heat Removal Pumps	Not applicable, the ESBWR does not use pumps for ~~have~~ ECCS ~~nor~~ safety-related containment cooling ~~pumps~~ functions.
98-01	5/11/98	NRC Generic Letter No. 98-01: Year 2000 Readiness of Computer Systems at Nuclear Power Plants	Outdated concern
98-01s1	1/14/99	NRC Generic Letter No. 98-01 Supplement 1: Year 2000 Readiness of Computer Systems at Nuclear Power Plants	Outdated concern

Table 1C-1

Operating Experience Review Results Summary – Generic Letters

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
98-04	7/14/98	Potential for Degradation of the Emergency Core Cooling System and the Containment Spray System After a Loss-of-Coolant Accident Because of Construction and Protective Coating Deficiencies and Foreign Material in Containment	Not applicable to the ESBWR GDCS. The GDCS pools do not have the debris transport mechanisms that the Suppression Pool is subject to. The PCCS pools are not subject to LOCA debris. There is no safety-related containment spray.
99-02	6/3/99	NRC Generic Letter 99-02: Laboratory Testing of Nuclear-Grade Activated Charcoal	~~Not Applicable. Is a procedural/verification communication.~~ ~~Subsection 9.4.1~~Chapter 16, Section 5.5.13.c
03-01	6/12/03	Control Room Habitability	The verification requirements are in accordance with the applicable regulatory guidance and standards. See Section 6.4
06-02	2/1/2006	Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power	~~COLA~~Subsection 8.2.2.1 and ninth bullet in Subsection 8.2.3
06-03	4/10/2006	Potentially Nonconforming Hemyc and MT Fire Barrier Configurations	Subsection 9.5.1 and Appendices 9A and 9B

Table 1C-2

Operating Experience Review Results Summary – IE Bulletins

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
79-02r2	3/8/79	Pipe Support Base Plate Designs Using Concrete Expansion Anchor Bolts	Subsection 3.9.3.7
79-08	4/14/79	Events Relevant to BWR Identified During TMI Incident	Appendix 1A
80-01	1/11/80	ADS Valve Pneumatic Supply	The design of the pneumatic supply to the ADS valves addresses the concerns with the potential loss of loss of pneumatic pressure. In addition, the ESBWR ADS design includes ~~has~~ a diverse type ~~means~~ of depressurization valves (DPVs) that don't rely on pneumatic supply~~ing the RPV using the DPVs~~.
80-03	2/6/80	Loss of Charcoal from Absorber Cells	Subsection 9.4.1
80-05	3/10/80	Vacuum Condition Resulting in Damage to Chemical and Volume Control System (CVCS) Holdup Tanks	Not applicable to BWRs
80-06	3/13/80	ESF Reset Controls	Subsections 6.2.4.1 and 7.3.1.1.2
80-08	4/7/80	Examination of Containment Liners Penetration Welds	~~COL Applicant/Holder~~Containment penetrations are designed to ASME Code Section III and Section XI requirements for design and accessibility of welds for in-service inspection to meet 10 CFR 50 Appendix A, General Design Criterion 16 (see Subsections 3.1.2.7 and 3.1.4.10). The application of ASME Code Section XI, to in-service examination of containment penetration welds is discussed in Subsection 3.6.2.1.1 and Section 6.6.
80-10	5/6/80	Non-Radioactive System – Potential for Unmonitored Release	Subsections 9.2.1 and 9.2.2
80-12	5/9/80	Decay Heat Removal System Operability	Not applicable to BWRs

Table 1C-2

Operating Experience Review Results Summary – IE Bulletins

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
80-13	5/12/80	Cracking in Core Spray Spargers	Not Applicable. The ESBWR does not have a core spray sparger or any comparable RPV internal structures that rely on flow distribution across the core to perform their post-accident design function.
80-15	6/18/80	Possible Loss of Emergency Notification System with Loss of Offsite Power	Subsection 9.5.2.2~~Not Applicable. Is an administrative communication.~~
80-20	7/31/80	Westinghouse Type W-2 Switch Failures	Not applicable to new equipment
80-21	11/6/80	Valve Yokes Supplied by Mole	Not applicable to new equipment
80-22	9/11/80	Automatic Industries, Model 200-500-008 Sealed Source Containers	Not applicable to new equipment
80-24	11/21/80	Prevention of Damage due to H_2O Leakage Inside Containment	Not applicable, the ESBWR Containment is cooled using the Chilled Water System (CWS), which is a closed loop system. Potential leakage inside containment from other systems is monitored by the Equipment and Floor Drain System. Subsection 9.3.3.
80-25	12/19/80	Operating Problems with Target Rock SRVs at BWRs	Not applicable to the ESBWR design. Different valve type to be used. Subsection 5.4.13
81-01	1/27/81	Surveillance of Mechanical Snubbers	~~COL Holder~~Subsection 3.9.3.7.1, Item (3)b
81-02	4/9/81	Failure of Gate Type Valves to Close	Not applicable to BWRs
81-02, Supp 1	8/19/81	Failure of Gate Type Valves to Close Against Differential Pressure	Not applicable to BWRs
81-03	4/10/81	Flow Blockage of Cooling Water to Safety System	Not applicable

Table 1C-2

Operating Experience Review Results Summary – IE Bulletins

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
82-04	12/3/82	Deficiencies in Primary Containment Electrical Penetration Assemblies	Subsection 8.3.4.7
83-06	7/22/83	Non-Conforming Materials Supplied by Tube-Line Corp.	Not applicable, vendor supply issue
84-01	2/3/84	Cracks in Boiling Water Reactor Mark I Containment Vent Headers	Not applicable to the ESBWR containment design
84-03	8/24/84	Refueling Cavity Water Seal	The ESBWR ~~will~~ utilizes permanently installed flexible bellows between the RPV and the refueling cavity.
85-03	11/15/85	Motor-Operated Valve Common Mode Failures During Plant Transients Due to Improper Switch Settings	Subsection 3.9.6.1~~Not Applicable. Is an administrative, maintenance and procurement communication.~~
85-03, Supp 1	4/27/88	Motor-Operated Valve Common Mode Failure During Plant Transients Due to Improper Switch Settings Past Related Correspondence: IE Bulletin 85-03, IE Notice 86-29, and IE Notice 87-01	Subsection 3.9.6.1~~Not Applicable. Is an administrative, maintenance and procurement communication.~~
86-01	5/23/86	Minimum Flow Logic Problems That Could Disable RHR Pumps	Not Applicable. The ESBWR does not have safety-related RHR pumps
86-03	10/8/86	Potential Failure of Multiple ECCS Pumps Due to Single Failure of Air-Operated Valve in Minimum Flow Recirculation Line	Not Applicable. The ESBWR does not have ECCS pumps
87-01	7/9/87	Thinning of Pipe Walls in Nuclear Power Plants Past Related Correspondence: IE Notice 88-17	Subsection 6.6.7
87-02	11/6/87	Fastener Testing to Determine Conformance with Applicable Material Specifications	~~Not Applicable. Is a procurement communication~~Addressed as part of Quality Assurance Program for Operations. See Section 17.2

Table 1C-2

Operating Experience Review Results Summary – IE Bulletins

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
87-02, Supp 1	4/22/88	Fastener Testing to Determine Conformance with Applicable Material Specifications ~~Past Related Correspondence: IE Notice 88-17~~	~~Not Applicable. Is a procurement communication~~Addressed as part of Quality Assurance Program for Operations. See Section 17.2
87-02, Supp 2	6/10/88	Fastener Testing to Determine Conformance with Applicable Material Specifications	~~Not Applicable. Is a procurement communication~~Addressed as part of Quality Assurance Program for Operations. See Section 17.2
88-04	5/5/88	Potential Safety-Related Pump Loss	Not applicable, the ESBWR does not have safety-related pumps.
88-07	6/15/88	Power Oscillations in Boiling Water Reactors (BWRs) Past Related Correspondence: IE Notice 88-39	Sections 4.4 and 4B.7
88-07, Supp 1	12/30/88	Power Oscillations in Boiling Water Reactors (BWRs)	Sections 4.4 and 4B.7
90-01	03/09/90	Loss of Fill-Oil in Transmitters Manufactured by Rosemount	Not applicable, the vendor has corrected the problem and new transmitters have been changed to correct the problem.
90-02	03/20/90	Loss of Thermal Margin Caused by Channel Box Bow	Section 4B.2
92-01	6/24/92	Failure of Thermo-Lag 330 Fire Barrier System to Maintain Cabling in Wide Cable Trays and Small Conduits Free from Fire Damage	Not Applicable. ~~The ESBWR provides strict physical separation between the redundant safety-related divisions. There is no need to use Thermo-Lag 330.~~See evaluation result for Generic Letter 92-08 in Table 1C-1.
92-01s1	8/28/92	Failure of Thermo-Lag 330 Fire Barrier System to Perform its Specified Fire Endurance Function	Not Applicable. See evaluation result for Generic Letter 92-08 in Table 1C-1~~above~~.

Table 1C-2

Operating Experience Review Results Summary – IE Bulletins

No.	Issue Date	Title	Evaluation Result or Topic's Tier 2 Location(s)
93-02	5/11/93	Debris Plugging of Emergency Core Cooling Suction Strainers	Not applicable to the ESBWR GDCS. The GDCS pools do not have the debris transport mechanisms that the Suppression Pool is subject to.
93-02s1	2/18/94	Debris Plugging of Emergency Core Cooling Suction Strainers	Not applicable to the ESBWR GDCS. See above.
93-03	5/28/93	Resolution of Issues Related to Reactor Vessel Water Level Instrumentation in BWRs	The ESBWR includes a continuous purge of water to the reference leg to prevent the buildup of non-condensable gases. The CRD Hydraulics provides this flow. Subsections 4.6.1.2.6 and 7.7.1.2
94-01	4/14/94	Potential Fuel Pool Draindown Caused by Inadequate Maintenance Practices at Dresden Unit 1	The FAPCS is designed to prevent the possibility of draining water from the Spent Fuel Storage Pool. Subsection 9.1.3
95-02	10/17/95	Unexpected Clogging of a Residual Heat Removal Pump Strainer While Operating in Suppression Pool Cooling Mode	Not Applicable. The ESBWR does not have a safety-related suppression pool cooling system.
96-02	4/11/96	Movement of Heavy Loads Over Spent Fuel, Over Fuel in the Reactor Core, or Over Safety-Related Equipment	~~Not Applicable. Is a procedural communication.~~ Subsection 9.1.5
96-03	5/6/96	Potential Plugging of Emergency Core Cooling Suction Strainers by Debris in Boiling-Water Reactors	Not applicable to the ESBWR GDCS. See response to IE Bulletin 93-02
96-04	7/5/96	Chemical, Galvanic, or Other Reactions in Spent Fuel Storage and Transportation Casks	Related to dry cask storage, which is not part of the ESBWR Standard Plant design. ~~Not Applicable. Is a procedural communication.~~
2005-02	7/18/05	Emergency Preparedness and Response Actions for Security-Based Events	Site-specific, and thus not within the scope of a design certification. COL Applicant will address requirements of IE Bulletin 2005-02 regarding emergency preparedness and response actions for security-based events. (Section 1C.2, Item 1C.1-2-A)