March 3, 2006

Mr. David Hinds, Manager, ESBWR
General Electric Company
P.O. Box 780, M/C L60
Wilmington, NC 28402-0780

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 10 RELATED TO ESBWR DESIGN CERTIFICATION APPLICATION

Dear Mr. Hinds:

By letter dated August 24, 2005, General Electric Company (GE) submitted an application for final design approval and standard design certification of the economic simplified boiling water reactor (ESBWR) standard plant design pursuant to 10 CFR Part 52. The Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed design.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter. This RAI concerns the Auxiliary Systems, Chapter 9 of Tier 2 of the ESBWR design control document. This RAI was sent to you via electronic mail on February 6, 2006, and was discussed with you during a telecon on February 14, 2006. You agreed to respond to these RAIs by March 31, 2006.

If you have any questions or comments concerning this matter, you may contact me at (301)415-207 or lnq@nrc.gov, Amy Cubbage at (301) 415-42875 or aec@nrc.gov or Lawrence Rossbach at (301) 415-2863 or lwr@nrc.gov.

Sincerely,

/RA/

Lauren Quinones, Project Manager
New Reactor Licensing Branch
Division of New Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 52-0010

Enclosure: As stated

cc: See next page

Mr. David Hinds, Manager, ESBWR
General Electric Company
P.O. Box 780, M/C L60
Wilmington, NC 28402-0780

March 3, 2006

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 10 RELATED TO ESBWR DESIGN CERTIFICATION APPLICATION

Dear Mr. Hinds:

By letter dated August 24, 2005, General Electric Company (GE) submitted an application for final design approval and standard design certification of the economic simplified boiling water reactor (ESBWR) standard plant design pursuant to 10 CFR Part 52. The Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed design.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter. This RAI concerns the Auxiliary Systems, Chapter 9 of Tier 2 of the ESBWR design control document. This RAI was sent to you via electronic mail on February 6, 2006, and was discussed with you during a telecon on February 14, 2006. You agreed to respond to these RAIs by March 31, 2006.

If you have any questions or comments concerning this matter, you may contact me at (301)415-207 or lnq@nrc.gov, Amy Cubbage at (301) 415-42875 or aec@nrc.gov or Lawrence Rossbach at (301) 415-2863 or lwr@nrc.gov.

Sincerely,

/RA/

Lauren Quinones, Project Manager
New Reactor Licensing Branch
Division of New Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 52-0010

Enclosure: As stated

cc: See next page

ACCESSION NO. ML060600047

OFFICE	NRBA/PM	NRBA/BC
NAME	LQuinones	LDudes
DATE	03/01/2006	03/03/2006

OFFICIAL RECORD COPY

Distribution for DCD RAI Letter No. 10 dated March 3, 2006

Hard Copy
PUBLIC
NRBA R/F
ACubbage
LRossbach
LQuinones

E-Mail
LDudes
JHan
JDehmel
TFrye
SKlementowicz
RPedersen
CHinson
SJones
CLi
JHernandez
YDiaz
JDanna
ACRS
OGC
ACubbage
LRossbach
LQuinones
JWilliams

RAI number	Reviewer	Question Summary	Full Text
9.2 -3	Dehmel JC	Location of reactor component cooling water system (RCCWS) radiation monitor No. 15	The RCCWS P&ID does not show the location of radiation monitor No. 15 (RCCW Inter-system Leakage) within this system. Please provide a drawing indicating the location of this radiation monitor. Note that "RE 104" and "RE 105" are shown on the P&ID but are not referenced in DCD Chapter 11. Also, Table 11.5-3 and Figure 11.5-1 of the DCD do not indicate whether radiation monitor No. 15 is located on Train A or B of the RCCWS. Provide updated revisions of Table 11.5-3 and Figure 11.5-1 that include Train A and B of the RCCWS.
9.2 -4	Dehmel JC	Provide an updated revision of Table 9.3-1 that includes the reactor component cooling water system (RCCWS).	The text notes that a provision for grab sampling from the RCCWS is provided for radiological analysis, but this provision is not included in Table 9.3-1 listing all process sampling systems. Provide an updated revision of Table 9.3-1 that includes the RCCWS.
9.2 -5	Dehmel JC	Clarify which is the applicable Hydraulic Institute Testing standard being referenced.	Although references are cited in the text, the full citations are missing in this subsection. Update the list of references to include the applicable Hydraulic Institute Testing standard.
9.3 -2	Dehmel JC	Revise the text and tables of Sections 9.3.3.2 and 11.2 to include the subsystems identified in Figure 11.2-1 as input to the Liquid Waste Management System.	This section describes equipment and floor drainage systems that may become contaminated. A review of this section and Figure 11.2-1 indicates that Drywell HCW/LCW discharges are not included in the descriptions of the listed systems. Revise the text and tables of Sections 9.3.3.2 and 11.2 to include the subsystems identified in Figure 11.2-1 as input to the Liquid Waste Management System. Also, update and provide supporting system flow diagrams, as needed.

RAI number	Reviewer	Question Summary	Full Text
9.4 -1	Dehmel JC	Update text, tables, and figures of Sections 9.4.2 and 11.5 for consistency with the nomenclatures used to designate the Fuel Building HVAC System and Subsystems .	The nomenclatures used to designate the Fuel Building HVAC System and Subsystems are not consistent with the corresponding designations used in the text, tables, and figures of Section 11.5. Update text, tables, and figures of both sections for consistency.
9.4 -2	Dehmel JC	Update text, tables, and figures of Sections 9.4.3.2 and 11.5 for consistency with the nomenclatures used to designate the Radwaste Building HVAC System and Subsystems .	The nomenclatures used to designate the Radwaste Building HVAC System and Subsystems are not consistent with the corresponding designations used in the text, tables, and figures of Section 11.5. The text (p.9.4-16) describing system operations does not discuss what actions are initiated by the system once the exhaust radiation monitor (ID No. 17) detects high radiation levels. Update text, tables, and figures of both sections for consistency.
9.4 -3	Dehmel JC	Update text, tables, and figures of Sections 9.4.4.4 and 11.5 for consistency with the nomenclatures used to designate the Turbine Building HVAC System and Subsystems. Confirm whether the Turbine Building Decontamination Room Exhaust Subsystem needs to added to the subsystems described in Section 11.5.	The nomenclatures used to designate the Turbine Building HVAC System and Subsystems are not consistent with the corresponding designations used in the text, tables, and figures of Section 11.5. The text (p.9.4-21) describing system operations does not discuss what actions are taken by the system once any of the exhaust radiation monitors (ID No. 5, 6, 7, 8, 9, or 14) detects high radiation levels. Update text, tables, and figures of both sections for consistency. Confirm whether the Turbine Building Decontamination Room Exhaust Subsystem needs to added to the subsystems described in Section 11.5. It is not clear from Figure 9.4-8 (sheet 3) and Figure 11.5-1 as to which radiation monitor (ID No. 5, 6, or 10?) services the discharge side of the Turbine Building Decontamination Room Exhaust Subsystem.

RAI number	Reviewer	Question Summary	Full Text
9.4 -4	Dehmel JC	Update text, tables, and figures of Sections 9.4.6.2 and 11.5 sections for consistency with the nomenclatures used to designate the Reactor Building HVAC System and Subsystems.	The nomenclatures used to designate the Reactor Building HVAC System and Subsystems are not consistent with the corresponding designations used in the text, tables, and figures of Section 11.5. Update text, tables, and figures of both sections for consistency.

cc:

Mr. David H. Hinds, Manager
ESBWR
P.O. Box 780, M/C L60
Wilmington, NC 28402-0780

Mr. George B. Stramback
Manager, Regulatory Services
GE Nuclear Energy
1989 Little Orchard Street, M/C 747
San Jose, CA 95125

Mr. David Lochbaum, Nuclear Safety Engineer
Union of Concerned Scientists
1707 H Street, NW., Suite 600
Washington, DC 20006-3919

Mr. Paul Gunter
Nuclear Information & Resource Service
1424 16th Street, NW, Suite 404
Washington, DC 20036

Mr. James Riccio
Greenpeace
702 H Street, Suite 300
Washington, DC 20001

Mr. Adrian Heymer
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Mr. Paul Leventhal
Nuclear Control Institute
1000 Connecticut Avenue, NW
Suite 410
Washington, DC 20036

Dr. Jack W. Roe
Nuclear Energy Institute
1776 I Street, NW
Washington, DC 20006-3708

Mr. Ron Simard
6170 Masters Club Drive
Suwanne, GA 30024

Mr. Brendan Hoffman
Research Associate on Nuclear Energy
and Environmental Program
215 Pennsylvania Avenue, SE
Washington, DC 20003

Mr. Tom Clements
6703 Gude Avenue
Takoma Park, MD 20912

Ms. Patricia Campbell
Morgan, Lewis & Bockius, LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004

Mr. Glenn H. Archinoff
AECL Technologies
481 North Frederick Avenue
Suite 405
Gaithersburg, MD. 20877

Mr. Gary Wright, Director
Division of Nuclear Facility Safety
Illinois Emergency Management Agency
1035 Outer Park Drive
Springfield, IL 62704

Mr. Charles Brinkman
Westinghouse Electric Co.
Washington Operations
12300 Twinbrook Pkwy., Suite 330
Rockville, MD 20852

Mr. Ronald P. Vijuk
Manager of Passive Plant Engineering
AP1000 Project
Westinghouse Electric Company
P. O. Box 355
Pittsburgh, PA 15230-0355

Mr. Ed Wallace, General Manager
Projects
PBMR Pty LTD
PO Box 9396
Centurion 0046
Republic of South Africa

Mr. Russell Bell
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Mr. Jerald S. Holm
Framatome ANP, Inc.
3315 Old Forest Road
P.O. Box 10935
Lynchburg, VA 24506-0935

Ms. Kathryn Sutton, Esq.
Morgan, Lewis & Bockius, LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004

Mr. Robert E. Sweeney
IBEX ESI
4641 Montgomery Avenue
Suite 350
Bethesda, MD 20814

Mr. Eugene S. Grecheck
Vice President, Nuclear Support Services
Dominion Energy, Inc.
5000 Dominion Blvd.
Glen Allen, VA 23060

Mr. George A. Zinke
Manager, Project Management
Nuclear Business Development
Entergy Nuclear, M-ECH-683
1340 Echelon Parkway
Jackson, MS 39213

E-Mail:
tom.miller@hq.doe.gov or
tom.miller@ nuclear.energy.gov
mwetterhahn@winston.com
whorin@winston.com
gcesare@enercon.com
jerald.holm@framatome-anp.com
eddie.grant@exeloncorp.com
joseph_hegner@dom.com
steven.hucik@ge.com
david.hinds@ge.com
chris.maslak@ge.com
james1beard@ge.com
louis.quintana@gene.ge.com
wayne.massie@ge.com
kathy.sedney@ge.com
george.stramback@gene.ge.com