December 2, 2005

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. 2 FOR THE ECONOMIC SIMPLIFIED BOILING WATER REACTOR (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 ESBWR standard plant design. The Nuclear Regulatory Commission (NRC) staff is performing a detailed review of the ESBWR design certification application and the staff has determined that additional information is necessary to continue portions of the review.

Enclosure 1 contains a request for additional information (RAI) regarding hydrology, seismic analysis methods, containment performance, and seismic margin assessment, areas discussed in Chapters 2, 3, and 19 of the ESBWR Design Certification Document (DCD). The RAIs were sent to you via electronic mail on November 9, 2005, and were discussed during a telecon on November 15, 2005. Please provide the requested information within 30 days so that the review can be completed in a timely manner.

If you have any questions or comments concerning this matter, you may contact me at (301) 415-2863 or lwr@nrc.gov or you may contact Amy Cubbage at (301) 415-2875 or aec@nrc.gov.

Sincerely,

/RA/

Lawrence Rossbach, Project Manager
New Reactor Licensing Branch
Division of New Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 52-010

Enclosure: As stated

cc: See next page

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ACCESSION NO. ML053220002

OFFICE	NRBA/PM	EGCB/BC	NRBA/BC
NAME	LRossbach	DJeng for KManoly	LDudes
DATE	12/2/2005	11/29/2005	12/2/2005

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Request for Additional Information (RAI)
Economic Simplified Boiling Water Reactor (ESBWR)
Design Certification Review
General Electric Company

Hydrology (DCD Section 2.4):

2.4.1-1 The design control document (DCD) states that the ESBWR does not need any safety-related service water, but it does not clarify if it needs a water cooled ultimate heat sink (UHS). General Design Criteria (GDC) 44 has detailed criteria for a system to transfer heat to a UHS. Please revise the DCD to clearly state if a water cooled UHS is needed.

2.4.1-2 Identify the inventory and release categories for accidental release on the ground for radioactive transport in ground water.

Seismic Analysis Method:

3.7.2-1 Specify in the DCD the analysis method for seismic analysis for Category II structures.

Containment Performance and Seismic Margin Assessment:

19.5.2-1 Provide a table in DCD Chapter 19 of high confidence low probability of failure (HCLPF) values for the seismic margins evaluation. Provide a discussion of seismic fragility evaluations methods. Also, provide a commitment to perform as-built HCLPF verification of equipment and components within the scope of the ESBWR.

19.5.2-2 Discuss in DCD Chapter 19 the ultimate capacity fragility evaluation of the containment structure.

Enclosure

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. Thomas P. Miller
U.S. Dept. of Energy, NE-20, Rm. A286
Headquarters - Germantown
19901 Germantown Road
Germantown, MD 20874-1290

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

E-Mail:
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