

June 5, 2008

Mr. Robert E. Brown  
Senior Vice President, Regulatory Affairs  
GE Hitachi Nuclear Energy  
3901 Castle Hayne Road MC A-50  
Wilmington, NC 28401

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 213 RELATED TO  
ESBWR DESIGN CERTIFICATION APPLICATION

Dear Mr. Brown:

By letter dated August 24, 2005, GE Hitachi Nuclear Energy (GEH) 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 U.S. 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.

If you have any questions or comments concerning this matter, you may contact me at 301-415-8484 or [Tom.Tai@nrc.gov](mailto:Tom.Tai@nrc.gov) or you may contact Amy Cabbage at 301-415-2875 or [Amy.Cabbage@nrc.gov](mailto:Amy.Cabbage@nrc.gov).

Sincerely,

*/RA/*

Tom M. Tai, Senior Project Manager  
ESBWR/ABWR Projects Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

Docket No. 52-010

Enclosure:  
Request for Additional Information

cc: See next page

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Division of New Reactor Licensing  
Office of New Reactors

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cc: See next page

Distribution: See next page

ADAMS ACCESSION NO. **ML**081540084

<b>OFFICE</b>	PM:NGE1	LPM:NGE1
<b>NAME</b>	TTai	ACabbage
<b>DATE</b>	06/05/08	06/05/08

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SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 213 RELATED TO  
ESBWR DESIGN CERTIFICATION APPLICATION DATED JUNE 5, 2008

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Wagage H, NRO  
Snodderly M, NRO

**Requests for Additional Information (RAIs)  
ESBWR Design Control Document (DCD), Revision 4**

<b>RAI Number</b>	<b>Reviewer</b>	<b>Question Summary</b>	<b>Full Text</b>
RAI 6.2-181	Wagage H	Confirm that the piping from PCCS to GDCS is designed to minimize the possibility of forming gas pockets in the piping during drainage	<p>ESBWR LOCA analyses assume that condensate from the passive containment cooling system (PCCS) drains to the gravity-driven cooling system (GDCS) tanks and then to the reactor pressure vessel. To ensure proper gravity drainage of water following a LOCA, the piping from the PCCS condensers to the GDCS tanks should be designed to minimize the possibility of forming gas pockets in the piping. Staff has issued RAI 21.6-112 requesting design information on injection piping from GDCS to the vessel.</p> <p>Please discuss how the piping from the PCCS condensers to the GDCS tanks will be designed to ensure that non-condensable gases will not collect in the lines and how features and design parameters that prevent collection of non-condensable gases in the lines will be verified through ITAAC.</p>

DC GE - ESBWR Mailing List  
cc:

(Revised 05/27/2008)

Ms. Michele Boyd  
Legislative Director  
Energy Program  
Public Citizens Critical Mass Energy  
and Environmental Program  
215 Pennsylvania Avenue, SE  
Washington, DC 20003

Mr. Ray Ganthner  
Senior Vice President  
AREVA, NP, Inc. 3315  
Old Forest Road  
P.O. Box 10935  
Lynchburg, VA 24506-0935

## DC GE - ESBWR Mailing List

### Email

aec@nrc.gov (Amy Cubbage)  
APH@NEI.org (Adrian Heymer)  
art.alford@ge.com (Art Alford)  
awc@nei.org (Anne W. Cottingham)  
bennettS2@bv.com (Steve A. Bennett)  
bevans@enercon.com (Bob Evans)  
bob.brown@ge.com (Robert E. Brown)  
BrinkmCB@westinghouse.com (Charles Brinkman)  
cberger@energetics.com (Carl Berger)  
chris.maslak@ge.com (Chris Maslak)  
CumminWE@Westinghouse.com (Edward W. Cummins)  
cwaltman@roe.com (C. Waltman)  
dan1.williamson@ge.com (Dan Williamson)  
david.hinds@ge.com (David Hinds)  
david.lewis@pillsburylaw.com (David Lewis)  
David.piepmeyer@ge.com (David Piepmeyer)  
dennis.chin@ge.com (Dennis Chin)  
dlochbaum@UCSUSA.org (David Lochbaum)  
don.lewis@ge.com (Don Lewis)  
erg-xl@cox.net (Eddie R. Grant)  
Eugene\_Grecheck@dom.com (Eugene S. Grecheck)  
frankq@hursttech.com (Frank Quinn)  
Frostie.white@ge.com (Frostie White)  
gcesare@enercon.com (Guy Cesare)  
GEH-NRC@hse.gsi.gov.uk (Geoff Grint)  
george.honma@ge.com (George Honma)  
george.stramback@gene.ge.com (George Stramback)  
george.wadkins@ge.com (George Wadkins)  
GovePA@BV.com (Patrick Gove)  
greshaja@westinghouse.com (James Gresham)  
gzinke@entergy.com (George Alan Zinke)  
hickste@earthlink.net (Thomas Hicks)  
james.beard@gene.ge.com (James Beard)  
jeff.waal@ge.com (Jeff Waal)  
jgutierrez@morganlewis.com (Jay M. Gutierrez)  
jim.kinsey@ge.com (James Kinsey)  
jim.riccio@wdc.greenpeace.org (James Riccio)  
jim.rogers@ge.com (Jim Rogers)  
JJNesrsta@cpsenergy.com (James J. Nesrsta)  
joel.Friday@ge.com (Joel Friday)  
John.O'Neill@pillsburylaw.com (John O'Neill)  
john.sorensen@ge.com (John Sorensen)  
Joseph\_Hegner@dom.com (Joseph Hegner)  
junichi\_uchiyama@mnes-us.com (Junichi Uchiyama)

## DC GE - ESBWR Mailing List

kathy.sedney@ge.com (Kathy Sedney)  
kathy.warnock@ge.com (Kathy Warnock)  
kenneth.ainger@exeloncorp.com (Kenneth Ainger)  
kimberly.milchuck@ge.com (Kimberly Milchuck)  
KSutton@morganlewis.com (Kathryn M. Sutton)  
kurt.schaefer@ge.com (Kurt Schaefer)  
kwaugh@impact-net.org (Kenneth O. Waugh)  
laura.bello@ge.com (Laura Bello)  
lou.lanese@ge.com (Lou Lanese)  
Marc.Brooks@dhs.gov (Marc Brooks)  
maria.webb@pillsburylaw.com (Maria Webb)  
mark.beaumont@wsms.com (Mark Beaumont)  
Marvin.Smith@dom.com (Marvin L. Smith)  
matias.travieso-diaz@pillsburylaw.com (Matias Travieso-Diaz)  
media@nei.org (Scott Peterson)  
mike\_moran@fpl.com (Mike Moran)  
MSF@nei.org (Marvin Fertel)  
mwetterhahn@winston.com (M. Wetterhahn)  
nirsnet@nirs.org (Michael Mariotte)  
PAC2@nrc.gov (Peter Cochran)  
pareez.golub@ge.com (Pareez Golub)  
Pat.Woodfin@ge.com (Pat Woodfin)  
patriciaL.campbell@ge.com (Patricia L. Campbell)  
paul.gaukler@pillsburylaw.com (Paul Gaukler)  
Paul@beyondnuclear.org (Paul Gunter)  
peter.jordan@ge.com (Peter Jordan)  
phinnen@entergy.com (Paul Hinnenkamp)  
pshastings@duke-energy.com (Peter Hastings)  
randy.newton@ge.com (Randy Newton)  
RJB@NEI.org (Russell Bell)  
RKTemple@cpsenergy.com (R.K. Temple)  
roberta.swain@ge.com (Roberta Swain)  
Russell.Wells@Areva.com (Russell Wells)  
sandra.sloan@areva.com (Sandra Sloan)  
SauerB@BV.com (Robert C. Sauer)  
sfrantz@morganlewis.com (Stephen P. Frantz)  
sharon.lyons@ge.com (Sharon Lyons)  
steven.hucik@ge.com (Steven Hucik)  
steven.stark@ge.com (Steven Stark)  
tdurkin@energetics.com (Tim Durkin)  
tom.miller@hq.doe.gov (Tom Miller)  
trsmith@winston.com (Tyson Smith)  
Vanessa.quinn@dhs.gov (Vanessa Quinn)  
VictorB@bv.com (Bill Victor)  
Wanda.K.Marshall@dom.com (Wanda K. Marshall)

DC GE - ESBWR Mailing List

waraksre@westinghouse.com (Rosemarie E. Waraks)

wayne.cutright@ge.com (Wayne Cutright)

wayne.marquino@ge.com (Wayne Marquino)

whorin@winston.com (W. Horin)