

February 19, 2010

MEMORANDUM TO: Hossein Hamzehee, Chief  
US-APWR Projects Branch  
Division of New Reactor Licensing  
Office of New Reactors

FROM: Michael Junge, Chief /RA/  
Operator Licensing and Human Performance Branch  
Division of Construction Inspection and Operational Programs  
Office of New Reactors

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION AUDIT REPORT  
FOR THE MITSUBISHI ELECTRIC POWER PRODUCTS, INC. SITE  
VISIT FOR DESIGN CERTIFICATION OF THE UNITED STATES -  
ADVANCED PRESSURIZED WATER REACTOR APPLICATION

As part of its review of the United States - Advanced Pressurized Water Reactor (US-APWR) Design Certification (DC) application, on July 14 - 15, 2009, members of the Operator Licensing and Human Performance Branch of the Division of Construction Inspection and Operational Programs performed an audit at the Mitsubishi Electric Power Products, Inc. facility in Warrendale, Pennsylvania. The purpose of the audit was to gain a better understanding of the human system interfaces for the US-APWR control room and the human factors engineering program that will be used to design them. Another purpose of the audit was to gain a better understanding of the Mitsubishi Heavy Industries, Ltd. responses to the U.S. Nuclear Regulatory Commission (NRC) staff's Requests for Additional Information (RAI) with regard to Topical Report MUAP-07007, Revision 2, "Human Systems Interface (HSI) System Description and Human Factors Engineering (HFE) Process," and MUAP-DC018, Revision 1, Chapter 18, "Human Factors Engineering."

Based on the exchange of information during the audit, the NRC audit team better understands the applicant's HFE program and did not identify any new concerns regarding the HFE topical report review or HFE DC review at this time. The NRC staff will review the RAI responses that have been submitted and conduct meetings or issue subsequent RAIs as needed. Also during the audit, the NRC audit team clarified its position regarding the completeness of Topical Report MUAP-07007. The NRC staff's findings are in the enclosed audit report.

Docket No. 52-021

Enclosure:  
As stated

cc w/ encl: See next page

CONTACT: Michael S. Magee, NRO/DNRL/NMIP  
301-415-6988

MEMORANDUM TO: Hossein Hamzehee, Chief  
US-APWR Projects Branch  
Division of New Reactor Licensing  
Office of New Reactors

FROM: Michael Junge, Chief /RA/  
Operator Licensing and Human Performance Branch  
Division of Construction Inspection and Operational Programs  
Office of New Reactors

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION AUDIT REPORT  
FOR THE MITSUBISHI ELECTRIC POWER PRODUCTS, INC. SITE  
VISIT FOR DESIGN CERTIFICATION OF THE UNITED STATES -  
ADVANCED PRESSURIZED WATER REACTOR APPLICATION

As part of its review of the United States - Advanced Pressurized Water Reactor (US-APWR) Design Certification (DC) application, on July 14 - 15, 2009, members of the Operator Licensing and Human Performance Branch of the Division of Construction Inspection and Operational Programs performed an audit at the Mitsubishi Electric Power Products, Inc. facility in Warrendale, Pennsylvania. The purpose of the audit was to gain a better understanding of the human system interfaces for the US-APWR control room and the human factors engineering program that will be used to design them. Another purpose of the audit was to gain a better understanding of the Mitsubishi Heavy Industries, Ltd. responses to the U.S. Nuclear Regulatory Commission (NRC) staff's Requests for Additional Information (RAI) with regard to Topical Report MUAP-07007, Revision 2, "Human Systems Interface (HSI) System Description and Human Factors Engineering (HFE) Process," and MUAP-DC018, Revision 1, Chapter 18, "Human Factors Engineering."

Based on the exchange of information during the audit, the NRC audit team better understands the applicant's HFE program and did not identify any new concerns regarding the HFE topical report review or HFE DC review at this time. The NRC staff will review the RAI responses that have been submitted and conduct meetings or issue subsequent RAIs as needed. Also during the audit, the NRC audit team clarified its position regarding the completeness of Topical Report MUAP-07007. The NRC staff's findings are in the enclosed audit report.

Docket No. 52-021

Enclosure:  
As stated

cc w/ encl: See next page

CONTACT: Michael S. Magee, NRO/DNRL/NMIP  
301-415-6988

DISTRIBUTION:

|          |                 |                        |                 |
|----------|-----------------|------------------------|-----------------|
| PUBLIC   | MMagee, NRO     | RidsNroLACSmith        | RidsNroDcipColp |
| NMIP R/F | JCiocco, NRO    | RidsAcraAcnwMailCentet |                 |
| D081     | RidsNroDnrlNmip | RidsOgcMailCenter      |                 |

ADAMS Accession Number: ML093350345; Pkg: ML093570201

NRO-001

|        |               |               |               |               |               |
|--------|---------------|---------------|---------------|---------------|---------------|
| OFFICE | DNRL/NMIP: PM | DNRL/NMIP: LA | DNRL/NMIP: PM | DCIP/COLP: BC | DNRL/NMIP: BC |
| NAME   | MMagee        | CSmith        | JCiocco       | MJunge        | HHamzehee     |
| DATE   | 01/14/2010    | 01/11/2010    | 02/1/2010     | 02/4/2010     | 02/19/2010    |

OFFICIAL RECORD COPY

DC Mitsubishi - US APWR Mailing List  
cc:

(Revised 02/04/2010)

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

Mr. Ed Wallace  
General Manager - Projects  
PBMR Pty LTD  
P. O. Box 9396  
Centurion 0046  
Republic of South Africa

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

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

Atsushi Kumaki  
Mitsubishi Heavy Industries, Ltd.  
APWR Promoting Department  
Wadasaki-cho- 1-1-1, Hyogo-ku  
Kobe 652-8585 JAPAN

Dr. Masanori Onozuka  
Mitsubishi Nuclear Energy Systems, Inc.  
1001 19th Street North, 7th Floor  
Arlington, VA 22201-5426

Dr. C. Keith Paulson  
Mitsubishi Nuclear Energy Systems, Inc.  
300 Oxford Drive, Suite 301  
Monroeville, PA 15146

Mr. Tom Sliva  
7207 IBM Drive  
Charlotte, NC 28262

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

## DC Mitsubishi - US APWR Mailing List

### Email

APH@NEI.org (Adrian Heymer)  
atsushi\_kumaki@mhi.co.jp (Atsushi Kumaki)  
awc@nei.org (Anne W. Cottingham)  
BrinkmCB@westinghouse.com (Charles Brinkman)  
chris.maslak@ge.com (Chris Maslak)  
ck\_paulson@mnes-us.com (C Keith Paulson)  
ckpaulson@aol.com (C.K. Paulson)  
CumminWE@Westinghouse.com (Edward W. Cummins)  
cwaltman@roe.com (C. Waltman)  
david.hinds@ge.com (David Hinds)  
david.lewis@pillsburylaw.com (David Lewis)  
DeLaBarreR@state.gov (R. DeLaBarre)  
Derinda.Bailey@chguernsey.com (Derinda Bailey)  
donald.woodlan@luminant.com (Donald Woodlan)  
eliza.seedcoalition@gmail.com (Elza Brown)  
erg-xl@cox.net (Eddie R. Grant)  
gcesare@enercon.com (Guy Cesare)  
james.beard@gene.ge.com (James Beard)  
jerald.head@ge.com (Jerald G. Head)  
jgutierrez@morganlewis.com (Jay M. Gutierrez)  
jim.riccio@wdc.greenpeace.org (James Riccio)  
jin\_chung@mnes-us.com  
JINesrsta@cpsenergy.com (James J. Nesrsta)  
John.O'Neill@pillsburylaw.com (John O'Neill)  
Joseph\_Hegner@dom.com (Joseph Hegner)  
KSutton@morganlewis.com (Kathryn M. Sutton)  
kwaugh@impact-net.org (Kenneth O. Waugh)  
lchandler@morganlewis.com (Lawrence J. Chandler)  
lon.burnam@house.state.tx.us (Lon Burnam)  
Marc.Brooks@dhs.gov (Marc Brooks)  
maria.webb@pillsburylaw.com (Maria Webb)  
mark.beaumont@wsms.com (Mark Beaumont)  
Mark.Crisp@chguernsey.com (Mark Crisp)  
masahiko\_kaneda@mhi.co.jp (Masahiko Kaneda)  
masanori\_onozuka@mnes-us.com (Masanori Onozuka)  
masayuki\_kambara@mhi.co.jp (Masayuki Kambara)  
matias.travieso-diaz@pillsburylaw.com (Matias Travieso-Diaz)  
mayorsouthern@granbury.org (Mayor David Southern)  
media@nei.org (Scott Peterson)  
mike\_moran@fpl.com (Mike Moran)  
MSF@nei.org (Marvin Fertel)  
mutsumi\_ishida@mnes-us.com (Mutsumi Ishida)  
mwetterhahn@winston.com (M. Wetterhahn)  
nan\_sirirat@mnes-us.com (Sirirat Mongkolkam)

## DC Mitsubishi - US APWR Mailing List

nirsnets@nirs.org (Michael Mariotte)  
Nuclaw@mindspring.com (Robert Temple)  
patriciaL.campbell@ge.com (Patricia L. Campbell)  
paul.gaukler@pillsburylaw.com (Paul Gaukler)  
Paul@beyondnuclear.org (Paul Gunter)  
plarimore@talisman-intl.com (Patty Larimore)  
pshastings@duke-energy.com (Peter Hastings)  
RJB@NEI.org (Russell Bell)  
Russell.Wells@Areva.com (Russell Wells)  
sabinski@suddenlink.net (Steve A. Bennett)  
sandra.sloan@areva.com (Sandra Sloan)  
satoshi\_hanada@mnes-us.com (Satoshi Hanada)  
satoshi\_watanabe@mnes-us.com (Satoshi Watanabe)  
sfrantz@morganlewis.com (Stephen P. Frantz)  
shinji\_kawanago@mnes-us.com (Shinji Kawanago)  
stephan.moen@ge.com (Stephan Moen)  
steven.hucik@ge.com (Steven Hucik)  
strambgd@westinghouse.com (George Stramback)  
Tansel.Selekler@nuclear.energy.gov (Tansel Selekler)  
tgilder1@luminant.com (Tim Gilder)  
tmatthews@morganlewis.com (T. Matthews)  
tom.miller@hq.doe.gov (Tom Miller)  
trsmith@winston.com (Tyson Smith)  
Vanessa.quinn@dhs.gov (Vanessa Quinn)  
VictorB@bv.com (Bill Victor)  
vijukrp@westinghouse.com (Ronald P. Vijuk)  
Wanda.K.Marshall@dom.com (Wanda K. Marshall)  
whorin@winston.com (W. Horin)  
yoshiki\_ogata@mhi.co.jp (Yoshiki Ogata)