

April 18, 2013

APPLICANT: MITSUBISHI HEAVY INDUSTRIES, LTD.

APPLICATION: UNITED STATES - ADVANCED PRESSURIZED WATER REACTOR  
DESIGN CERTIFICATION REVIEW

SUBJECT: SUMMARY OF THE MARCH 18, 2013, PUBLIC AND CLOSED  
TELECONFERENCE WITH MITSUBISHI HEAVY INDUSTRIES, LTD. TO  
DISCUSS MHI'S RESPONSE TO STAFF'S RAI 923-6420 AND 947-6540

On March 18, 2013, a Category 1 public teleconference was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Mitsubishi Heavy Industries, Ltd. (MHI). The meeting notice was issued on March 5, 2013, and was documented in the Agencywide Documents Access and Management System under accession number ML13059A349. The purpose of the meeting was to discuss MHI's responses to Request for Additional Information (RAI) 923-6420 and RAI 947-6540. A list of attendees is provided as an enclosure.

On February 9, 2012, a Category 2 public meeting was held between the NRC and representatives of MHI to discuss the United States - Advanced Pressurized Water Reactor (US-APWR) Generic Safety Issue-191 Closure Plan (Meeting Summary: ML120740538). At this meeting, MHI discussed design changes to the Refueling Water Storage Pit (RWSP) recirculation flow path. The staff determined it was necessary to review the associated design change documents in order to complete its review of Chapter 6 of the US-APWR Design Control Document (DCD) and an audit was performed during April 16 - 17, 2012 (Audit Report: ML12187A758). As a result of the audit the staff issued RAI 923-6420 and RAI 947-6540. MHI responded on July 31, 2012 and August 1, 2012, respectively.

In RAI 923-6420, the staff requested MHI to provide justifications that the proposed design changes are conservative with respect to the containment functional design, and do not adversely impact the various containment and the sub-compartment pressure/temperature response analyses. MHI's response provided qualitative information to justify that the RWSP recirculation flow path change has no impact on the sub-compartment analysis provided in the DCD. At the teleconference, MHI explained that they performed sensitivity analyses to investigate the effect of the flow path changes on the sub-compartment analysis and that the results confirm that the DCD, Revision 3 analysis remains bounding. In order for the staff to be able to close this issue an audit needs to be performed to review MHI's sensitivity analyses, for example to verify the impact of additional paths on the other volumes in the analysis.

In RAI 947-6540, the staff requested MHI to include in the DCD the fouling factors for the Containment Spray/Residual Heat Removal (CS/RHR) heat exchanger. In its response dated August 1, 2012, MHI stated that the fouling factor will be added to DCD Table 5.4.7-2, "Equipment Design Parameter of CS/RHR heat exchanger." The staff had further questions regarding the value provided by MHI. At the teleconference, the staff explained their concerns and informed MHI that two follow-up RAIs (Sections 06.02.01 and 05.04.07) will be issued to

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request the applicant to justify the heat removal capacity and the tube-side and shell-side fouling factors for the CS/RHR heat exchanger.

Please direct any inquiries to me at 301-415-3249, or via e-mail to [Ruth.Reyes@nrc.gov](mailto:Ruth.Reyes@nrc.gov).

**/RA/**

Ruth C. Reyes, Project Manager  
Licensing Branch 2  
Division of New Reactor Licensing  
Office of New Reactors

Docket No. 52-021

Enclosure:  
List of Attendees

cc w/encl: See next page

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**/RA/**

Ruth C. Reyes, Project Manager  
Licensing Branch 2  
Division of New Reactor Licensing  
Office of New Reactors

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cc w/encl: See next page

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**NRC-001**

OFFICE	DNRL/LB2: PM	DNRL/LB2: LA	DNRL/LB2: PM	DNRL/LB2: PM
NAME	RReyes	CMurphy	JCiocco	RReyes
DATE	04/17/2013	04/17/2013	04/18/2013	04/17/2013

**OFFICIAL RECORD COPY**

List of Attendees

Teleconference with Mitsubishi Heavy Industries, Ltd. to Discuss MHI'S Response to Staff's RAI  
923-6420 and 947-6540 for the Teleconference Held on March 18, 2013

<u>NAME</u>	<u>AGENCY/AFFILIATION</u>
Tony Banks	Dominion Virginia Power
Addison Hall	Dominion Virginia Power
John Conley	Luminant Generation Company, LLC.
Yasutaka Harai	Mitsubishi Heavy Industries, Ltd.
Shinji Kawanago	Mitsubishi Heavy Industries, Ltd.
Hiroshi Matsuoka	Mitsubishi Heavy Industries, Ltd.
Shuhei Miyake	Mitsubishi Heavy Industries, Ltd.
Yuji Momose	Mitsubishi Heavy Industries, Ltd.
Takafumi Ogino	Mitsubishi Heavy Industries, Ltd.
Shinji Otani	Mitsubishi Heavy Industries, Ltd.
Naohiko Seto	Mitsubishi Heavy Industries, Ltd.
Mark Biery	Mitsubishi Nuclear Energy Systems
Scott Kiffer	Mitsubishi Nuclear Energy Systems
Yuko Fujita	Mitsubishi Nuclear Energy Systems
Hiroshi Hamamoto	Mitsubishi Nuclear Energy Systems
Yuta Maruyama	Mitsubishi Nuclear Energy Systems
Keith Paulson	Mitsubishi Nuclear Energy Systems
Ryan Sprengel	Mitsubishi Nuclear Energy Systems
Rebecca Steinman	Mitsubishi Nuclear Energy Systems
Jennifer Thein	Mitsubishi Nuclear Energy Systems
Syed Haider	U.S. Nuclear Regulatory Commission
John McKirgan	U.S. Nuclear Regulatory Commission
Ruth Reyes	U.S. Nuclear Regulatory Commission
Jeffrey Schmidt	U.S. Nuclear Regulatory Commission

Enclosure

cc:

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

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

## DC Mitsubishi - US APWR Mailing List

### Email

acpasswater@aol.com (Al Passwater)  
APH@NEI.org (Adrian Heymer)  
atsushi\_kumaki@mhi.co.jp (Atsushi Kumaki)  
awc@nei.org (Anne W. Cottingham)  
bgattoni@roe.com (William (Bill) Gattoni)  
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)  
donald.woodlan@luminant.com (Donald Woodlan)  
eliza.seedcoalition@gmail.com (Elza Brown)  
erg-xl@cox.net (Eddie R. Grant)  
erin\_wisler@mnes-us.com (Erin Wisler)  
ewallace@nuscalepower.com (Ed Wallace)  
gcesare@enercon.com (Guy Cesare)  
hiroki\_nishio@mhi.co.jp (Hiroki Nishio)  
james1.beard@ge.com (James Beard)  
jerald.head@ge.com (Jerald G. Head)  
Joseph\_Hegner@dom.com (Joseph Hegner)  
joseph\_tapia@mnes-us.com (Joseph Tapia)  
jrappe@nuscalepower.com (Jodi Rappe)  
jrund@morganlewis.com (Jonathan Rund)  
karlg@att.net (Karl Gross)  
kevin\_lynn@mnes-us.com (Kevin Lynn)  
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)  
m.goto@mnes\_us.com  
maria.webb@pillsburylaw.com (Maria Webb)  
mark.a.giles@dom.com (Mark Giles)  
mark.beaumont@wsms.com (Mark Beaumont)  
masanori\_onozuka@mnes-us.com (Masanori Onozuka)  
masatoshi\_nagai@mnes-us.com (Masatoshi Nagai)  
matias.travieso-diaz@pillsburylaw.com (Matias Travieso-Diaz)  
media@nei.org (Scott Peterson)  
michael\_melton@mnes-us.com (Michael Melton)  
MSF@nei.org (Marvin Fertel)  
nirsnet@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)

## DC Mitsubishi - US APWR Mailing List

pbessette@morganlewis.com (Paul Bessette)  
plarimore@talisman-intl.com (Patty Larimore)  
rebecca\_steinman@mnes-us.com (Rebecca Steinman)  
RJB@NEI.org (Russell Bell)  
ryan\_sprengel@mnes-us.com (Ryan Sprengel)  
sabinski@suddenlink.net (Steve A. Bennett)  
sfrantz@morganlewis.com (Stephen P. Frantz)  
stephan.moen@ge.com (Stephan Moen)  
strambgb@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)  
Tony.Robinson@areva.com (Tony Robinson)  
trsmith@winston.com (Tyson Smith)  
Vanessa.quinn@dhs.gov (Vanessa Quinn)  
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)