

## US-APWRRRAIsPEm Resource

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**From:** Reyes, Ruth  
**Sent:** Thursday, November 21, 2013 11:10 AM  
**To:** 'us-apwr-rai@mhi.co.jp' (us-apwr-rai@mhi.co.jp); US-APWRRRAIsPEm Resource  
**Cc:** Gilmer, James; Schmidt, Jeffrey; Buckberg, Perry  
**Subject:** US-APWR Topical Report MUAP-07034 Request for Additional Information  
**Attachments:** US-APWR Topical Report MUAP-07034 RAI 11-21-13.pdf

MHI,

The attachment is a final RAI for Topical Report MUAP-07034 " FINDS: Mitsubishi PWR Fuel Assemblies Seismic Analysis Code." This RAI was sent to you in draft form. Your licensing review schedule assumes technically correct and complete responses within 30 days of receipt of RAIs.

thanks,

Ruth C. Reyes  
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Division of New Reactor Licensing  
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**Hearing Identifier:** Mitsubishi\_USAPWR\_DCD\_eRAI\_Public  
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**Subject:** US-APWR Topical Report MUAP-07034 Request for Additional Information  
**Sent Date:** 11/21/2013 11:10:24 AM  
**Received Date:** 11/21/2013 11:10:25 AM  
**From:** Reyes, Ruth

**Created By:** Ruth.Reyes@nrc.gov

**Recipients:**

"Gilmer, James" <James.Gilmer@nrc.gov>  
Tracking Status: None  
"Schmidt, Jeffrey" <Jeffrey.Schmidt2@nrc.gov>  
Tracking Status: None  
"Buckberg, Perry" <Perry.Buckberg@nrc.gov>  
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Tracking Status: None  
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Tracking Status: None

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**Options**

**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
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**REQUEST FOR ADDITIONAL INFORMATION TOPICAL REPORT  
FINDS: MITSUBISHI PWR FUEL ASSEMBLIES SEISMIC ANALYSIS CODE  
MUAP-07034, REVISION 4**

11/21/2013

US-APWR TOPICAL REPORT

Mitsubishi Heavy Industries

Docket No. 52-021

By letter dated June 28, 2013, Mitsubishi Heavy Industries, Ltd. (MHI) submitted Revision 4 of the Topical Report MUAP-07034, "FINDS: Mitsubishi PWR Fuel Assemblies Seismic Analysis Code." The NRC staff has identified that additional information is needed to continue portions of the review.

1. The new Section 3.5.2, "Axial Flow Damping Effect," discusses MHI's experience with axial flow damping increase with coolant flow for 12-ft fuel assembly tests, but does not provide a specific reference to the test report. The technical references listed do provide general justification for crediting the effect of flow damping for PWR fuel, but not specifically the US-APWR design. Please provide the report which includes the MHI tests and include it as a reference in MUAP-07034-P. Also, since the US-APWR specific tests have now been completed, please include a reference to the Technical Report MUAP-13020-P, "Axial Flow Damping Test of the Full Scale US-APWR Fuel Assembly."