MITSUBISHI HEAVY INDUSTRIES, LTD.

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TOKYO, JAPAN

August 29, 2012

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC20555-0001

Attention: Mr. Jeffrey A. Ciocco

Docket No. 52-021
MHI Ref: UAP-HF-12238

Subject: **Updated Closure Plan for US-APWR Seismic and Structural Analyses**

References:
(1) Letter (ML11136A235 / MHI Ref: UAP-HF-11134) from Y. Ogata (MHI) to U.S. NRC, "Revised Completion Plan for US-APWR Seismic and Structural Analyses" dated May 12, 2011
(2) Letter (ML110240150) from D. Matthews (NRC) to Y. Ogata (MHI), "Schedule Change for the United States – Advanced Pressurized Water Reactor Design Certification" dated February 24, 2011
(3) File (ML111080683), "Summary of the March 31, 2011, Public Meeting with Mitsubishi Heavy Industries, Ltd., Discuss Its Proposal to the Seismic Analysis and Containment Design, Design Control Document, Section 3.7 and Section 3.8 as Part of the United States – Advanced Pressurized Water Reactor Nuclear Power Plant Combined License Application" dated April 27, 2011
(4) Letter (ML11249A091 / MHI Ref: UAP-HF-11290) from Y. Ogata (MHI) to U.S. NRC, "Updated Completion Plan for US-APWR Seismic and Structural Analyses" dated September 1, 2011
(5) Letter (ML11269A048 / MHI Ref: UAP-HF-11319) from Y. Ogata (MHI) to U.S. NRC, "Updated Completion Plan for US-APWR Seismic and Structural Analyses" dated September 22, 2011
(6) Letter (ML12011A031 / MHI Ref: UAP-HF-12001) from Y. Ogata (MHI) to U.S. NRC, "Plan to Update the Completion Plan for US-APWR Seismic and Structural Analyses" dated January 5, 2012

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(7) Letter (ML12094A342 / MHI Ref: UAP-HF-12082) from Y. Ogata (MHI) to U.S. NRC, "Final Closure Plan for US-APWR Seismic and Structural Analyses" dated March 31, 2012

With this letter Mitsubishi Heavy Industries, Ltd. (MHI) provides an update to the current resolution plan for the completion of seismic issues related to the US-APWR. This update is intended to further address and resolve previously identified concerns regarding seismic analyses of the US-APWR. MHI has made design changes and design methodology changes to simplify the design and reduce the number of required analyses.

In Reference 1, MHI provided a revised completion plan for seismic and structural analyses to address issues identified by the NRC in Reference 2 and NRC comments provided during the public meeting held on March 31, 2011 (Reference 3). Reference 1 also included a schedule for submitting related documents, making documents available for audit, and a list of affected DCD sections. In Reference 4, MHI reported completion plan progress and committed to finalize Attachments 1, 2 and 3 of Reference 1 by the end of September 2011. In Reference 5, MHI finalized Attachments 1, 2 and 3, as committed.

In Reference 6, MHI informed the NRC that progress towards completing structural seismic analyses was reported at the November 7, 2011 public meeting. Since then, additional analysis and design changes have been made as part of completing US-APWR standard plant structural seismic analysis and design.

Reference 7 provided updates to previously submitted information, which included a summary of changes to seismic inputs as noted during the March 29, 2012 NRC public meeting. The major changes were improvements to the plant layout, including establishing the Nuclear Island by combining the reactor building complex, auxiliary building, and east and west power source buildings on a common basemat, and establishing the Turbine Island by combining the turbine building and electrical room on a common basemat.

This letter provides further updates concerning the feasibility of the segment of the essential service water pipe tunnel (ESWPT) between the reactor building (R/B) and turbine building (T/B) foundations. The NRC requested that this be considered at the seismic closure plan meeting for Comanche Peak Unit 3 and 4. As a result of MHI and DCWG investigation and collaboration, the following design enhancements will be incorporated into the DCD.

- Integration of the south portion of the ESWPT into the south side of the R/B complex foundation to simplify structural design and analysis of the R/B and T/B sliding, and the piping connection design between the R/B and the ESWPT
- Increased distance between the R/B complex and the Turbine Island

- Thicker R/B complex south wall and minor configuration/layout changes inside the R/B (These changes are necessary to eliminate credit for T/B as adjacent/intervening structure)

Note that as part of the evaluation of the design changes, the Aircraft Impact Assessment is being updated. Although no additional changes are expected as a result of the updated assessment, they will be incorporated if identified.

This letter also updates previously submitted information in Attachments 1, 2, 3 and 4 for the following respective subjects:

- Attachment 1, List and schedule of impacted Technical Reports
- Attachment 2, List and schedule of impacted calculations for seismic and structural analyses
- Attachment 3, List and schedule of impacted DCD chapters, and corresponding markups
- Attachment 4, RAI response assessment and schedule (historical, on-hold, and open) Responses will be submitted by the end of February 2013. RAIs currently in progress will be responded to by those commitment dates previously indicated by MHI.

Please contact Mr. Joseph Tapia, General Manager of Licensing Department, Mitsubishi Nuclear Energy Systems, Inc. if the NRC has questions concerning any aspect of this letter. His contact information is provided below.

Sincerely,

Y. Ogata

Yoshiki Ogata,
Director – APWR Promoting Department
Mitsubishi Heavy Industries, LTD.

CC: J. A. Ciocco
J. Tapia

Contact Information

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Attachment 1

Submittal Dates of Technical Reports

Table 1-1

Technical Reports for DCD Sections 3.7 and 3.8

Doc. #	Title	Current Contents	Updates and Future Contents	Date to NRC
MUAP-10006	Soil-Structure Interaction Analyses and Results for the US-APWR Standard Plant	Rev. 1: - Results of SSI Analysis for R/B (LMSM) and PS/B (FE model) Rev. 2:Oct 2011 Completed(UAP-HF-11369) - Results of SSI Analysis for R/B (updated to FE model) and PS/B (updated design and stiffness) based on the updated MUAP-10001 - Update reference to SASSI to clarify that version 2.3.0 includes module updates through Nov 2009 - Update to reflect gap assessment - Update to include appendix containing parametric study of soil profile for compliance with SRP 3.7.2 - Update to include missing soil properties observed by NRC staff - Update discussion on gaps between buildings	Rev. 3 General: - Add description of R/B Complex, comprising the R/B , PCCV, CIS, A/B, and East &West PS/Bs and Common basemat and Essential Service Water Pipe Chase (ESWPC) - Methodology and results of sliding stability has been removed and placed in MUAP-12002 - Incorporate the analysis methodology from MUAP-10001, MUAP-11001, and MUAP-11011 including soil profiles and time histories, as applicable - Reformat to better present information Part 1: Generic site assumptions - Multiple soil columns / CSDRS (unchanged) / Time histories / Engineered fill/Backfill Part 2: Model development and validation - Static, Dynamic model / SSSI model Part 3: Results - SSI / SSSI / Bearing pressure, wall pressure, overturning / ISRS - Update to reflect results of SSI for R/B complex and SSSI analysis to confirm the effect from Turbine Island (TI) to R/B complex	December 2012

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Table 1-1

Technical Reports for DCD Sections 3.7 and 3.8

Doc. #	Title	Current Contents	Updates and Future Contents	Date to NRC
MUAP-11002	T/B Model Properties, SSI Analyses, and Structural Integrity Evaluation	Rev. 0: - Description of Model for T/B (FE model) - Results of SSI for T/B Rev. 1: Oct 2011 Completed(UAP-HF-11369) - Description of Model for T/B - Results of SSI for T/B with the T/B - Methodology and Results of Sliding Stability - Methodology and Results of Overturning Stability - Description of Displacement of T/B - Update to reflect RAIs 766-5819 (03.07.02) and 767-5821 (03.08.04)	Rev. 2 - Update the methodology for TI, comprised of the turbine building (T/B) and electrical room (E/R) - Results of SSI for combined TI foundation - Methodology and Results of Overturning Stability - Description of Displacement for TI - Methodology and Results of Sliding Stability are superseded by MUAP-12002	November 2012
MUAP-11007	Embedment and Ground Water Effects on SSI	Rev. 0: June 2011Completed (UAP-HF-11196) - Methodology of Sliding Stability - Methodology of Sensitivity Study on Water Table Effect - Methodology on Sensitivity Study on Embedment Effect Rev. 1: Oct.2011 Completed(UAP-HF-11196) - Revise due to updated time history and soil profile inputs - Results of Sensitivity Study on Water Table Effect (FE Model) - Results of Sensitivity Study on Embedment Effect (LMSM) - Results of Sliding Stability (FE Model)	Rev. 2: - Description of Embedment Effect which is evaluated by severe conditions - Description of Ground Water Effect - Results of Sliding Stability (FE Model) removed and placed in MUAP-12002	November 2012

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Table 1-1

Technical Reports for DCD Sections 3.7 and 3.8

Doc. #	Title	Current Contents	Updates and Future Contents	Date to NRC
MUAP-12002	Sliding Evaluation and Results	Rev.0: May 2012 Completed (UAP-HF-12145) - Description of Methodology of Sliding Evaluation for R/B complex and TI	Rev.1 - Description of Results of Sliding Evaluation for R/B complex and TI - Includes 1.1 amplification of input signal - Includes sensitivity studies for o Coefficient of friction o Percentage live load o water table level	December 2012

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Table 1-2

Technical Reports to be Incorporated or Withdrawn

Doc. #	Title	Current Contents	Updates and Future Contents	Date to NRC
MUAP-10001	Seismic Design Bases of the US-APWR Standard Plant	Rev. 2: - Description of Model for R/B (LMSM) and PS/B (FE model) - Validation of Model for R/B (LMSM) and PS/B (FE model) - Methodology of Concrete Cracking Effects	- Content will be incorporated into MUAP-10006, Rev. 3	N/A
		Rev. 3: June 2011Completed(UAP-HF-11179) - Description of Model for R/B (updated to FE model) and PS/B (update for design changes and stiffness) - Validation of Model for R/B (updated to FE model) and PS/B (update to reflect minor design changes) - Update Methodology of Concrete Cracking Effects (including stiffness reduction, damping values) - Update reference to SASSI to clarify that version 2.3.0 includes module updates through Nov 2009		
		Rev. 4: Oct2011 Completed(UAP-HF-11369) - Update development of soil profiles and strain compatible properties - Update time history methodology - Update description of structures and layout		

Table 1-2

Technical Reports to be Incorporated or Withdrawn

Doc. #	Title	Current Contents	Updates and Future Contents	Date to NRC
MUAP-11001	A/B Model Properties, SSI Analyses, and Structural Integrity Evaluation	Rev. 0: - Description of Model for A/B (FE model) - Results of SSI for A/B Rev. 1: June 2011Completed(UAP-HF-11182) - Description of Model for A/B (unchanged) - Methodology of Stability and relative displacement for A/B (previously excluded)	- Content will be incorporated into MUAP-10006, Rev. 3	N/A
MUAP-11006	Validation of LMSM for R/B Complex	Rev. 0: June 2011Completed(UAP-HF-11196) - Description of Model for R/B (LMSM) – used only for sliding stability and sensitivity studies - Validation of Model for R/B (LMSM)	- Withdraw since LMSM is changed to FEM	N/A
MUAP-11011	Effects of Structure-Soil-Structure Interaction (SSSI) on Standard Seismic Design of US-APWR Plant	Rev. 0: June 2011Completed(UAP-HF-11196) - Methodology of SSSI Analysis	- Content will be incorporated into MUAP-10006, Rev. 3	N/A
MUAP-08002	PS/B Enhanced Information for PS/B Design	Rev. 0: - Provide results of the lumped mass stick model analysis of east and west PS/Bs	- Content will be incorporated into MUAP-10006, Rev. 3 - FEM of PS/Bs now part of R/B complex	N/A

Table 1-2

Technical Reports to be Incorporated or Withdrawn

Doc. #	Title	Current Contents	Updates and Future Contents	Date to NRC
MUAP-08005	Dynamic Analysis of the Coupled RCL-R/B-PCCV-CIS Lumped Mass Stick Model	Rev. 0: - Provide dynamic seismic analysis of the coupled system including the RCL, R/B, PCCV, and CIS. - Frequencies and mode shapes of dominant modes - Acceleration and displacement responses of structures - Forces and moments in selected building structures - ISRS	- Models have already changed from LMSM to FEM and contents were incorporated into MUAP-10001 Rev. 4 - MUAP-10001 Rev. 4is being incorporated into MUAP-10006, Rev. 3	N/A

Table 1-3

Technical Reports Related to Steel Concrete (SC) Modules

Doc. #	Title	Current Contents	Updates and Future Contents	Date to NRC
MUAP-11005	Research Achievements of SC Structure and Strength Evaluation of US-APWR SC Structure Based on 1/10th Scale Test Results	Rev. 0: - Collection of research references - Evaluation of 1/10th Scale Test	Rev. 1: - Additional research references - Incorporate discussion from RAI responses	December 2012
MUAP-11013	Design Criteria for SC Modules	Rev. 0: June 2011 Completed (UAP-HF-11196) - Design Criteria for SC modules - Methodology for SC modules Rev. 1: August 2011 Completed (UAP-HF-11265) Further clarify design approach for the CIS (ACI 349 methodology)	Rev. 2 - Update Summary of Physical Test Results - Update Summary of Analytical Results (If necessary) - Incorporate discussion from RAI responses	February 2013
MUAP-11018	CIS: Stiffness and Damping for Analysis	Rev. 0: [Task 1-A] August 2011 Completed (UAP-HF-11256) - Applied stiffness and damping for each part of CIS	Rev. 1 - Incorporate discussion from RAI responses	December 2012
MUAP-11019	CIS: SC Wall Design Criteria (For In-Plane and Out-of-Plane Behavior)	Rev. 0: [Task 2-A]September 2011Completed(UAP-HF-11316) - Design criteria for in-plane behavior - Design criteria for out-of-plane behavior - Design criteria for interaction equation - Scope and description of additional testing	Rev. 1 - Incorporate discussion from RAI responses - Summary of revised tie-bar configuration	January 2013

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Table 1-3

Technical Reports Related to Steel Concrete (SC) Modules

Doc. #	Title	Current Contents	Updates and Future Contents	Date to NRC
MUAP-11020	CIS: Anchorage, Connection, and Section Design and Detailing	Rev. 0: [Task 2-C, 2-D (excluding design adequacy check)]September 2011Completed(UAP-HF-11335) - Design criteria for anchorage - Design criteria for connections - Design criteria for section design and detailing - Scope and description of additional testing	Rev. 1 - Incorporate discussion from RAI responses	February 2013

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Table 1-4

Technical Reports for Other DCD Sections

Doc. #	Title	Current Contents	Updates and Future Contents	Date to NRC
MUAP-08012*	Sump Strainer Stress Report	Rev. 1: - Stress Results based on SSI Analysis for R/B (LMSM)	Rev. 2: - Stress Results based on SSI Analysis for R/B Complex (FEM)	June 2013
MUAP-07033*	Mechanical Analysis for US-APWR New and Spent Fuel Racks	Rev. 0: - Stress Results based on SSI Analysis for R/B (LMSM)	Rev. 1: - Stress Results based on SSI Analysis for R/B Complex (FEM)	December 2013
MUAP-07032*	Criticality Analysis for US-APWR New and Spent Fuel Racks	Rev.1 - Critical analysis of New and Spent Fuel Racks which component structure is based on SSI analysis for R/B (LMSM)	Rev.2 - Critical analysis of New and Spent Fuel Racks based on the component structure is described in MUAP-07033.Rev.1	December 2013
MUAP-09014*	Thermal-Hydraulic Analysis for US-APWR Spent Fuel Racks	Rev.0 Thermal-hydraulic analysis of the spent fuel rack (SFRs)which component structure is based on SSI analysis for R/B (LMSM)	Rev.1 - Thermal-hydraulic analysis of the spent fuel racks (SFRs) which component structure is described in MUAP-07033 Rev.1	December 2013
MUAP-08007*	Evaluation Results of US-APWR Fuel System Structural Response to Seismic and LOCA Loads	Rev. 3: - Stress Results based on SSI Analysis for R/B (LMSM)	Rev. 4: - Stress Results based on SSI Analysis for R/B (FEM)	July 2013

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Table 1-4

Technical Reports for Other DCD Sections

Doc. #	Title	Current Contents	Updates and Future Contents	Date to NRC
MUAP-10023*	Initial Type Test Result of Class 1E Gas Turbine Generator System	Rev. 2: - GTG seismic test results based on the bounding seismic input	Rev. 3 - Re-evaluation of the test results based on SSI Analysis for PS/B (R/B complex). - Stress Results of the other components (e.g., the Generator and Air Receiver Assembly) based on SSI Analysis for PS/B (R/B complex)	August 2013
MUAP-09002	Summary of Seismic and Accident Load Conditions for Primary Components and Piping	Rev.2 - Seismic and accident loads conditions for PSC design specifications	Rev.3 - Revise the seismic loads based on the SSI Analysis for R/B Complex (FEM)	July 2013

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Notes)

R4: Revisions to Letter (MHI Ref: UAP-HF-12082) from Y. Ogata (MHI) to U.S. NRC, "Final Closure Plan for US-APWR Seismic and Structural Analyses" dated March 31, 2012.

*: MHI will examine the seismic design changes and layout changes to determine if revisions are required. If a revision is required, the report will be submitted to NRC.

Attachment 2

Dates of Calculation Reports

Table 2-1	Calculations in Support of Noted Technical Report or RAI Response (Available for Audit)
Table 2-2	Calculations in Support of Basic Structural Design (Available for Audit)
Table 2-3	Calculations – To be incorporated or withdrawn
Table 2-4	Calculations for Steel Concrete (SC) Modules and Other SSCs (Available for Audit)

Table 2-1
Calculations in Support of Noted Technical Report or RAI Response (Available for Audit)

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
NIC-13-05-113-001 (MUAP-10006)	Dynamic FE Model Development and Validation of the R/B Complex	Rev. 0: - Dynamic FE Model Development of R/B Complex	Rev. 1: - Update to the Dynamic FE Model Development and validation of the R/B Complex for AIA/ESWPT modifications	November 2012
NIC-13-05-113-002 (MUAP-10006)	R/B Complex Standard Plant SSI Analysis	N/A	Rev. 0: - Calculation documenting the Soil-Structure Interaction analyses of the R/B Complex with reduced stiffness (lower bound) SSE damping and full stiffness (upper bound) OBE damping	November 2012
NIC-13-05-205-001 (MUAP-12002)	Non-Linear Sliding Analysis of the Standard Plant R/B Complex	N/A	Rev. 0:	December 2012
NIC-13-05-205-002 (MUAP-10006)	Seismic Stabilities (Overturning and Bearing Pressure) of the Standard Plant R/B Complex	N/A	Rev. 0:	November 2012
SPS-13-05-113-003 (MUAP-11007)	Effect of Embedment on Seismic SSI Response of the US-APWR Standard Plant R/B Complex	Rev. 0: - Study of the effects of embedment from a surface mounted model to an embedded model	Rev. 1: Effects of surface mounted to embedded model removed and replaced with study of the effects of 0-sided to 4-sided embedment on the R/B Complex.	November 2012
SPS-13-05-113-010 (MUAP-11007)	Ground Water Table Effect on SSI Response of the US-APWR Standard Plant R/B Complex	N/A	Rev. 0: - Ground Water Table Effect on Seismic Soil-Structure Interaction Response of the US-APWR Standard Plant R/B Complex	November 2012

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Table 2-1
Calculations in Support of Noted Technical Report or RAI Response (Available for Audit)

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
SPS-13-05-113-011 (MUAP-11007)	SSI Analysis: Flexible Volume Method versus Modified Subtraction Method Study	N/A	Rev. 0:	October 2012
SPS-13-05-113-006 (MUAP-10006)	Standard Plant Soil Profiles	Rev. 0: - Standard Plant Soil Profiles developed for surface mounted structures	Rev. 1: Standard Plant Soil Profiles developed for surface mounted structures updated for an embedded structure	November 2012
SPS-13-05-113-007 (MUAP-10006)	Selection of Design Basis Time Histories	N/A	Rev. 0:	November 2012
SPS-13-05-113-008 (MUAP-10006)	Structure-Soil-Structure Interaction Analysis: R/B Complex and T/B	N/A	Rev. 0: - Standard Plant SSSI Analysis	November 2012
SPS-13-05-205-001 (MUAP-12002)	Short Term and Long Term Settlement Analysis of Standard Plant Structure	N/A	Rev. 0: - Update to include changes resulting from original time history seed (Northridge) - Update to include changes to the building layout	December 2012
SPS-13-05-113-009 (MUAP-10006)	SSI and SSSI Analysis – ISRS Results	N/A	Rev. 0:	November 2012
SPS-13-05-113-012 (MUAP-10006)	Development of Target Power Spectral Densities Compatible with DCD CSDRS	N/A	Rev. 0:	November 2012
SPS-13-05-113-013 (MUAP-12002)	Development of Design Basis Time Histories using Northridge Mount Baldy Seed	N/A	Rev. 0:	November 2012

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Table 2-1
Calculations in Support of Noted Technical Report or RAI Response (Available for Audit)

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
SPS-13-05-113-018 (MUAP-12002)	Development of Time Histories for Non-Linear Sliding	N/A	Rev. 0:	November 2012
TUB-13-05-113-001 (MUAP-12002)	Turbine Building Standard Plant SSI Analysis for Non-Linear Sliding	N/A	Rev. 0:	November 2012
TUB-13-05-205-001 (MUAP-12002)	Non-Linear Sliding Analysis of the Standard Plant TI	N/A	Rev. 0:	November 2012

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Table 2-2
Calculations in Support of Basic Structural Design (Available for Audit)

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
REB-13-05-230-001	Design Report for the Basic Design of the US-APWR NI	Rev. 0: - Basic Design Results based on the seismic design forces obtained by LMSM	Rev. 1: - Basic Design Results based on the seismic design forces obtained by FEM	June 2013
CIS-13-05-230-004	Basic Analysis and Design of CIS	Rev. 0: - Basic Design Results based on the seismic design forces obtained by LMSM	Rev. 1: - Basic Design Results based on the seismic design forces obtained by FEM - Check of the design adequacy against the enhanced detailed design criteria reports, including design check of critical sections - Tasks 1-B (Seismic analysis), 2-B (Wall and slab design), 2-C (Anchorage/connection design) and 2-D (SC section detailing)	June 2013
RBF-13-05-205-001	Basic Analysis of the US-APWR NI (including stability evaluation)	Rev. 0: - Basic Design Results based on the seismic design forces obtained by LMSM	Rev. 1: - Basic Design Results based on the seismic design forces obtained by FEM	June 2013
RBF-13-05-205-002	Basic Design of Common Basemat (ASME)	Rev. 0: - Basic Design of R/B Foundation (ASME)	Rev. 1: - Basic Design of Common R/B Basemat (ASME)	June 2013
PCV-13-05-230-013 (DCD)	PCCV Liner Strain & Anchor Displacement Near Discontinuities	Rev. 0: June 2011 - Detailed calculation of strain results near penetrations	Rev. 1: - Detailed calculation of strain results near penetrations	June 2013
PCV-13-05-230-004 (PCV-13-05-230-003)	Basic Design Verification of PCCV	Rev. 2: - Basic Design Verification of PCCV	Rev. 3: - Basic Design Verification of PCCV	June 2013

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Table 2-2
Calculations in Support of Basic Structural Design (Available for Audit)

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
PCV-13-05-230-005 (PCV-13-05-230-003)	PCCV Thermal Analysis	Rev. 0: - PCCV Thermal Analysis	Rev. 1: - PCCV Thermal Analysis	June 2013
PCV-13-05-230-006 (PCV-13-05-230-003)	PCCV Creep Evaluation	Rev. 0: - PCCV Creep Evaluation	Rev. 1: - PCCV Creep Evaluation	June 2013
PCV-13-05-230-007 (PCV-13-05-230-003)	PCCV Tendon Prestress Evaluation	Rev. 1: - PCCV Tendon Prestress Evaluation	Rev. 2: - PCCV Tendon Prestress Evaluation	June 2013
PCV-13-05-230-008	Basic Design of PCCV Liner System	Rev. 0: - PCCV Liner Anchor Design	Rev. 1: - PCCV Liner Anchor Design	June 2013
PCV-13-05-230-010	PCCV Buttress Design	Rev. 1: - PCCV Buttress Design	Rev. 2: - PCCV Buttress Design	June 2013
PCV-13-05-230-011	PCCV Equipment Hatch and Airlock Analysis	Rev. 2: - PCCV Equipment Hatch and Airlock Analysis	Rev. 3: - PCCV Equipment Hatch and Airlock Analysis	June 2013
PCV-13-05-230-012	PCCV Equipment Hatch and Airlock Design	Rev. 1: - PCCV Equipment Hatch and Airlock Design	Rev. 2: - PCCV Equipment Hatch and Airlock Design	June 2013
PCV-13-05-271-001	Concrete Calculation for Evaluation of Local Stresses and Rebar Requirements at Sleeve Penetrations	Rev. 1: - Concrete Calculation for Evaluation of Local Stresses and Rebar Requirements at Sleeve Penetrations	Rev. 2: - Concrete Calculation for Evaluation of Local Stresses and Rebar Requirements at Sleeve Penetrations	June 2013
PCV-13-05-272-001	Design of PCCV Mechanical Penetrations	Rev. 1: - Type I through Type V General Penetration for Small Bore Piping and Electrical Penetrations	Rev. 2: - Type I through Type V General Penetration for Small Bore Piping and Electrical Penetrations	June 2013

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Table 2-2
Calculations in Support of Basic Structural Design (Available for Audit)

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
PCV-13-05-272-002	Design of PCCV Electrical and Ventilation Penetrations	Rev. 1: - Large Bore Mechanical Pipe Penetrations	Rev. 2: - Large Bore Mechanical Pipe Penetrations	June 2013
PCV-13-05-272-003	Design of PCCV Fuel Transfer Tube Penetration	Rev. 1: - Fuel Transfer Tube Penetration	Rev. 2: - Fuel Transfer Tube Penetration	June 2013
PCV-13-05-272-004	PCCV Penetration Design Basis Calculation	Rev. 1: - Main Steam, Main Feedwater and Blowdown Pipe Penetrations	Rev. 2: - Main Steam, Main Feedwater and Blowdown Pipe Penetrations	June 2013
PCV-13-05-262-001	Calculation for Attachment Loading to the Liner Plate (Loading Calculation)	Rev. 1: - Calculation for Attachment Loading to the Liner Plate (Loading Calculation)	Rev. 2: - Calculation for Attachment Loading to the Liner Plate (Loading Calculation)	June 2013
PCV-13-05-262-002	Calculation for 4 Typical Attachments to Containment Wall Liner Plate	Rev. 1: - Calculation for 4 Typical Attachments to Containment Wall Liner Plate	Rev. 2: - Calculation for 4 Typical Attachments to Containment Wall Liner Plate	June 2013
PCV-13-05-640-001 (CIS-13-05-230-004)	Calculation for SC Module Anchors	Rev. 1: - Calculation for SC Module Anchors	Rev. 2: - Calculation for SC Module Anchors	June 2013
PCV-13-05-640-002 (Supports: CIS-13-05-230-004)	Calculation for Rebar Coupler for CIS	Rev. 1: - Calculation for Rebar Coupler for CIS	Rev. 2: - Calculation for Rebar Coupler for CIS	June 2013

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Table 2-3
Calculations – To be incorporated or withdrawn

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
REB-13-05-113-004 (MUAP-10006)	R/B Complex Standard Plant SSI Analysis	Rev. 0: October 2011 - Calculation documenting the runs of the R/B, PCCV analyses with reduced stiffness (lower bound) SSE damping and full stiffness (upper bound) OBE damping and CIS analysis with reduced stiffness and associated damping	- Content will be incorporated into NIC-13-05-113-002	N/A
PSB-13-05-113-002 (MUAP-10006)	PS/B Complex Standard Plant SSI Analysis	Rev. 0: - PS/B Standard Design SSI Analysis Rev.1: October 2011 - Calculation documenting the runs of the R/B and PS/B analyses with reduced stiffness (lower bound) SSE damping and full stiffness (upper bound) OBE damping	- Content will be incorporated into NIC-13-05-113-002	N/A
REB-13-05-113-003 (MUAP-10001)	Dynamic FE Model Development and Validation of R/B	Rev. 0: - Dynamic FE Model Development of R/B	- Content will be incorporated into NIC-13-05-113-001	N/A
REB-13-05-205-003 (Short term & long term settlement); (MUAP-11001, 11002, and 10006)	Subgrade Modeling in Finite Element Analysis - Settlement Calculation	Rev. 0: October 2011 - Long term deformation module for sand sites and clay sites - Long term displacements for Soil Profile 270-500 considering two types of subgrade –sand and clay - Settlements of all structures including dishing effects and effects of primary consolidation (clay) - Tilt of all structures from long term loads for gap - Differential settlements from long term	- Content will be incorporated intoSPS-13-05-205-001	N/A

Table 2-3
Calculations – To be incorporated or withdrawn

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
		loads (between adjacent structures and for each structure) - Update to include changes to the building layout - Update to include changes resulting from new time history seed - Update to reflect changes in soil profiles		
REB-13-05-205-004 (Seismic & static bearing pressure); (MUAP-11001, 11002, and 10006)	Subgrade Modeling in Finite Element Analysis - Bearing Pressure Demand Calculation	Rev. 0: October 2011 - Demand and allowable bearing pressures	- Content will be incorporated intoNIC-13-05-205-002	N/A
	New Calculation Report - Documenting Reduced Stiffness of CIS	Void - Refer to REB-13-05-113-004: October 2011	- Content will be incorporated intoNIC-13-05-113-001	N/A
PCV-13-05-230-009 (PCV-13-09-230-004,010,012)	Postprocessor Theory	N/A	Delete	N/A
PCV-13-05-277-001	Preliminary Calculation for Polar Crane Runway Girder Calculation	Rev. 1: - Preliminary Calculation for Polar Crane Runway Girders	Delete	N/A
PCV-13-05-277-002	Preliminary Design of PCCV Polar Crane Bracket Structural Steel and Anchorage to Concrete	Rev. 1: - Preliminary Calculation for Polar Crane Support Brackets	Delete	N/A
PCV-13-05-277-003	Anchorage Design for Polar Crane Bracket	Rev. 0: - Anchorage Design for Polar Crane Bracket	Delete	N/A

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Table 2-3
Calculations – To be incorporated or withdrawn

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
REB-13-05-113-001 (MUAP-11006)	Lumped Mass Stick Model Development of R/B	Rev. 0: - Lumped Mass Stick Model Development of R/B	Delete	N/A
PSB-13-05-230-002 (MUAP-10006)	Design Report for the Basic Design of the US-APWR PS/B	Rev. 0: - Basic Design Results based on the seismic design forces obtained by FEM	- Results incorporated in the revision of REB-13-05-230-001	N/A
PSB-13-05-113-001 (MUAP-10001)	Dynamic Model Development and Validation of PS/B	Rev. 0: - Dynamic Model Development and Validation of PS/B	- Results incorporated in the revision of MUAP-10006	N/A
PSB-13-05-113-002 (MUAP-10001 & -10006)	PS/B Standard Design SSI Analysis	Rev. 0: - PS/B Standard Design SSI Analysis	- Results incorporated in the revision of MUAP-10006	N/A
PSB-13-05-205-001 (MUAP-11007)	Stability Evaluation of PS/B	Rev. 0: - Stability Evaluation of PS/B	- Results incorporated in the revision of MUAP-12002 for sliding and MUAP-10006 for SSI analysis	N/A
AUB-13-05-113-001 (MUAP-11001)	Static and Dynamic Model Development and Structural Integrity Evaluation of A/B	Rev. 0: - Static and Dynamic Model Development and Structural Integrity Evaluation of A/B	- Results incorporated in the revision of MUAP-10006	N/A
AUB-13-05-113-002 (MUAP-11001)	A/B Standard Design SSI Analysis	Rev. 0: - A/B Standard Design SSI Analysis	- Results incorporated in the revision of MUAP-10006	N/A
AUB-13-05-205-001 (MUAP-11001)	Stability Evaluation of A/B	Rev. 0: - Stability Evaluation of A/B	- Results incorporated in the revision of MUAP-12002	N/A
RB-13-05-113-002 (MUAP-10001)	R/B Standard Design SSI Analysis	Void - Refer to REB-13-05-113-004		N/A
REB-13-05-205-001		Void -Refer to RBF-13-05-205-001		N/A
REB-13-05-205-002		Void -Refer to RBF-13-05-205-002		N/A

Table 2-3
Calculations – To be incorporated or withdrawn

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
RBF-13-05-205-003		Void - Refer to RBF-13-05-205-002		N/A
PCV-13-05-641-001		Void - Refer to PCV-13-05-230-008		N/A
PCV-13-05-270-001		Void - Refer to PCV-12-05-230-013		N/A

Table 2-4
Calculations for Steel Concrete (SC) Modules and Other SSCs (Available for Audit)

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
CIS-13-15-150-002 (MUAP-11013)	1/6th Scale Test of Primary Shield Structure: Analysis up to SSE Level Loading	Rev. 0: - Results of CIS pushover analysis up to SSE	- None Planned	N/A
CIS-13-15-150-003 (MUAP-11013)	1/6th Scale Test of Primary Shield Structure: Analysis Beyond SSE Level Loading	Rev. 0: - Results of CIS pushover analysis beyond SSI	- None Planned	N/A
CIS-13-15-150-004 (MUAP-11013)	Benchmarked NIFE Models for SC Components: In-Plane Behavior	Rev. 0: - Benchmarking of NIFE models to SC components and primary shield - In Plane Behavior - Thermal Mechanical Behavior	- None Planned	N/A
CIS-13-15-150-005 (MUAP-11013)	Benchmarked NIFE Models for SC Components: Out-of-Plane Behavior	Rev. 0: - Benchmarking of NIFE models to SC components and primary shield - Out-of-Plane Behavior	- None Planned	N/A
CIS-13-15-150-007 (MUAP-11013)	1/10th Scale CIS Test: Analysis up to SSE Level Loading	Rev. 0: - Benchmarking of NIFE models to 1/10th scale CIS test up to SSE	- None Planned	N/A
CIS-13-15-150-008 (MUAP-11013)	1/10th Scale CIS Test: Analysis Beyond SSE Level Loading	Rev. 0: - Benchmarking of NIFE models to 1/10th scale CIS test beyond SSE	None Planned	N/A
CIS-13-15-150-010 (MUAP-11013)	US-APWR CIS Containment Internal Structure Seismic Capacity	Rev. 0: - Results of CIS pushover analysis	- None Planned	N/A

Table 2-4
Calculations for Steel Concrete (SC) Modules and Other SSCs (Available for Audit)

Doc. # (support to)	Title	Current Contents	Updates and Future Contents	Available Following Last Date
UAP-SGI-09001	US-APWR Design Certification Aircraft Impact Assessment	Rev 0: - Layout based on DCD Rev. 2	Rev 1: - Revision/reconciliation based on the adjusted layout	June 2013
TBD (MUAP-11002)	Steel Member Stress of T/B	N/A	Rev 0: - Check of the adequacy of steel member by checking member stress	March 2013
CIS-13-05-150-013	SC Module Out-of-plane Shear Confirmatory Physical Tests	N/A	Rev. 0: - Test 1.0: Shear Connector (Interfacial Shear) Strength Test Results	September 2012
			Rev. 1: - Test 2.0: Monotonic Out of Plane Test Results - 1/2 Scale (Test 2.1) - Full Scale (Test 2.2)	November 2012
			Rev. 2: - Test 3.0: Accident Thermal + Out of - Plane Test Results	December 2012
CIS-13-05-150-014	SC Module Joint Shear Strength Confirmatory Physical Test	N/A	Rev. 0: - Test 4.0: Joint Shear Strength Test Results	December 2012
CIS-13-05-150-015	SC Module Basemat Connection Confirmatory Physical Tests	N/A	Rev. 0: - Test 5.0: SC Anchorage Test Results - Transverse Shear of SC Anchorage (Test 5.1) - Test 6.0: Cyclic In Plane Shear Test of SC Anchorage Test Results	November 2012
			Rev. 1: - Test 5.0: SC Anchorage Test Results - Out of Plane Shear of SC - Anchorage (Test 5.2)	December 2012

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Notes:

R3: Revisions to Letter (MHI Ref: UAP-HF-12082) from Y. Ogata (MHI) to U.S. NRC, " Final Closure Plan for US-APWR Seismic and Structural Analyses" dated March 31, 2012.

- Since the above listed documents are internal documents, the above information is subject to change

Attachment 3

Table 3

Impacts on DCD

Table 3 Impact on DCD					
DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
Tier 1	2.2.1.1, 2.2.1.4, 2.2.1.7, 2.2.1.9 Descriptions of R/B complex, including PS/B, A/B, and AC/B basemats		X		February 2013
Tier 1	2.2.1.6 Full paragraph to be revised to reflect updated information, to add description of ESW pipe chase (ESWPC) as part of the standard design, and to delete reference to site-specific ESWPT Add interface requirements for gaps between ESWPC and site-specific ESWPT, if necessary			X	February 2013
Tier 1	Tier 1 Table 2.2-1 Update table notes			X	February 2013
Tier 1	Tier 1 Layout drawings (Figure 2.2-1 thru 25)	X	X	X	February 2013
Tier 1	Tier 1 Table 2.2-2 Update Wall Thicknesses Update table notes	X		X	February 2013
Tier 1	Tier 1 Table 2.2-5 Update layout change			X	February 2013
Tier 2 1	1.2.1.7 Update description to be consistent with layout drawing changes such as PS/B (1.2.1.7.2.2) and A/B (1.2.1.7.2.5)		X		February 2013
1	1.2.1.7.1 Update common basemat of R/B, A/B and PS/B		X		February 2013

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Table 3 Impact on DCD

DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
1	1.2.1.7.2.4 Clarify CDI for ESWPT design and add interface requirements if necessary			X	February 2013
1	1.2 Plot Plan and Layout drawings (Figure 1.2-1 thru 1.2-51)	X	X	X	February 2013
1	Table 1.6-2 Update technical report information as necessary			X	February 2013
1	Table 1.8-1 Update the interface information of ESWPT			X	February 2013
2	Table 2.3.4-1 to Table 2.3.4-7 Revise the horizontal distance source to receptor, straight distance and direction receptor to source (degree) Figure 2.3-2 Site Plan with Release and Intake Locations		X	X	February 2013
3	3.3.1.2 Update the description for Determination of Applied Forces for PS/B and A/B to reflect the layout change		X		February 2013
3	3.4 Update floor areas for Internal Flooding Analysis		X	X	February 2013
3	3.4.1.3, 3.4.3 Add the description that flooding analysis in ESWPC is COL item			X	February 2013
3	3.6.3.3, 3.6.3.3.4, Table 3.6-2 MS piping material may be changed to SA 106 from SA 333	X			February 2013

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Table 3 Impact on DCD					
DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
3	Figure 3.6-1 Update drawing to reflect wall thickness change			X	February 2013
3	3.7.1.1 Update the methodology of Design Ground Motion development	X			February 2013
3	3.7.1.2 Update this discussion to tie to the bounding conditions discussion in 3.7.2.4 with respect to how structural damping values are selected	X			February 2013
3	3.7.1.3 Update generic soil profiles	X			February 2013
3	3.7.2 Revise description and methodology for seismic response analyses to address the change from multiple basemats to the new analyses with a single common basemat	X	X		February 2013
3	3.7.2 Update generic profiles	X			February 2013
3	3.7.2.1 Revise discussion of seismic analysis methods to reflect latest methods, especially Table 3.7.2-1	X			February 2013
3	3.7.2.2 Update FE models to common basemat structure	X	X		February 2013
3	3.7.2.2 Update natural frequencies and responses discussion based on the latest results and incorporate key results information from MUAP-10006 Update with any needed references to T/B reports and/or results (general note and may apply to other sections)	X	X		February 2013

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Table 3 Impact on DCD

DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
3	3.7.2.3.1 Update FE models to common basemat structure Update analytical models discussion particularly regarding bounding conditions analyses and how structural damping values are assigned in conjunction with the various bounding/stiffness conditions (cracked, uncracked)	X	X	X	February 2013
3	3.7.2.3.2, 3.7.2.3.3 Update FE models to common basemat structure	X	X		February 2013
3	3.7.2.3.2 Update generic soil profiles	X			February 2013
3	3.7.2.3.7, 3.7.2.3.8, 3.7.2.3.9, 3.7.2.3.9.1, and 3.7.2.3.9.2 Update the description for the stiffness and mass properties	X	X		February 2013
3	3.7.2.3.10, 3.7.2.3.10.1, 3.7.2.3.10.2, 3.7.2.3.10.3, 3.7.2.3.10.4, and 3.7.2.3.10.5 Update FE models to common basemat structure	X	X	X	February 2013
3	3.7.2.3.11 Update FE models to common basemat structure	X	X		February 2013
3	3.7.2.4, 3.7.2.4.1 Revise to address how the standard design envelopes embedment effects Update FE models to common basemat structure	X	X	X	February 2013
3	3.7.2.4 Update generic profiles	X			February 2013
3	3.7.2.4.1 Update FE models to common basemat structure	X		X	February 2013
3	3.7.2.5 Update FE models to common basemat structure	X	X		February 2013

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Table 3 Impact on DCD

DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
3	3.7.2.8 Update to reflect new design changes for stability	X			February 2013
3	3.7.2.8.1 Update the description of AC/B to reflect the layout change of the common basemat structure	X	X		February 2013
3	3.7.2.8.2 Update the description of T/B to reflect to the layout change of the new gap size and common basemat structure	X	X		February 2013
3	3.7.2.8.3 Update the description of ESWPT to reflect the layout change of the common basemat structure within R/B Complex Clarify the site-specific design information using CDI designator	X	X	X	February 2013
3	3.7.2.8.4 Update the description of A/B(Cat II) over Cat I to reflect the layout change of the common basemat structure	X	X		February 2013
3	3.7.2.8.5, 3.7.2.8.6 Update the description of R/B, PCCV and PSB to reflect the layout change of the common basemat structure Revise the description of PS/B plan dimension	X	X		February 2013
3	3.7.2.11 Update FE models to common basemat structure	X	X		February 2013
3	3.7.2.14 Update to reflect non-linear sliding evaluation methodology	X			February 2013

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Table 3 Impact on DCD					
DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
3	3.7.4 Update the information on seismic instrumentation locations and compliance with NRC guidance based on a single seismic category I basemat. Add a COLA item for COL applicants to place seismic instrumentation in site-specific seismic Category I structures to comply with NRC guidance		X		February 2013
3	3.7.5 Update COL items of 3.7(3), 3.7(25) and 3.7(28) to reflect the layout change of the common basemat structure	X	X		February 2013
3	3.7.6 Update references based on new revisions of reports and new technical reports	X			February 2013
3	3.7 Tables and Figures Revise tables 3.7.1-3 and 3.7.2-3 and models in Figure 3.7.2-3, Figure 3.7.2-4, Figure 3.7.2-5, Figure 3.7.2-6, and Figure 3.7.2-7 to reflect the layout change to common basemat Revise table 3.7.1-6 to update the general soil profiles Revise table 3.7.2-2 to reflect the concrete stiffness Revise figures 3.7.1-3 thru 3.7.1-8 to update the time history Revise figure 3.7.2-9 to reflect the layout change to common basemat	X	X	X	February 2013
3	3.8.1.4 Update based on latest design information based on the technical Report	X			February 2013
3	3.8.1.6 MS piping material may be changed to SA 106 from SA 333. Concrete design compressive strength for the common basemat changed to 5,000 psi from 4,000 psi.	X			February 2013

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Table 3 Impact on DCD					
DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
3	3.8.3 (General) Update information on SC modules based on the results of the tests and MUAP updates	X			March 2013
3	3.8.4.1.3 Provide description of methodology used for stability evaluations	X		X	February 2013
3	3.8.4.4.1.1 Update for critical sections along with any figures and tables	X			February 2013
3	3.8.4.6.1.1 Revise concrete strength	X			February 2013
3	3.8.5.1 Update foundation description to common basemat (R/B Complex, A/B, east and west PS/B)	X	X		February 2013
3	3.8.5.4.1 Update embedment effects discussion. Update models to common basemat structure	X			February 2013
3	3.8.5.4.1 Update generic profiles	X			February 2013
3	3.8.5.4.4 Revise analyses of settlement and bearing capacity discussion as required to reflect latest methodology	X			February 2013
3	3.8.5.5, 3.8.5.5.2 Update stability discussion adding non-linear sliding methodology Update models to common basemat structure	X			February 2013
3	3.8.6 Update COL item 3.8(30) to reflect non-linear sliding methodology	X			February 2013
3	3.8.7 Update references based on new revision of reports and new reports	X			February 2013

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Table 3 Impact on DCD					
DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
3	Tables 3.8.1-1 Concrete design compressive strength for the common basemat changed to 5,000 psi from 4,000 psi	X			February 2013
3	Tables 3.8.1-3, 3.8.4-2 Revise Tables 3.8.1-3 and 3.8.4-2 to reflect the layout changes to common basemat	X		X	February 2013
3	Tables 3.8.4-7, 3.8.4-9, 3.8.4-12, and 3.8.5-4 Update wall thickness and common basemat parameters			X	February 2013
3	3.8 Figures Revise figures 3.8.3-6 (Sheet 6 of 7), 3.8.3-6 (Sheet 7 of 7), 3.8.4-2, 3.8.4-3, 3.8.4-10, 3.8.4-11, 3.8.4-12, 3.8.5-1, 3.8.5-2, 3.8.5-3, 3.8.5-4, 3.8.5-5, 3.8.5-6, 3.8.5-7, 3.8.5-8, 3.8.5-9, 3.8.5-10 to reflect the layout changes to common basemat and changes to concrete force, thickness of PCCV penetrations and R/B walls	X	X	X	February 2013
3	Figure 3.8.1-8 Revise figures 3.8.1-8 (sheet 13 of 17), 3.8.1-8 (sheet 14 of 17) to reflect PCCV wall thickness change.	X			February 2013
3	Figures3.8.1-9, 3.8.4-9 Revise figures 3.8.1-9 and 3.8.4-9			X	February 2013
3	3.8 Figures Revise figures3.8.4-5,3.8.4-7, 3.8.4-13, 3.8.4-14, 3.8-5-11, 3.8-5-12, and 3.8-5-13			X	February 2013
Appendix 3B	3B.2.2.2, Table 3B-2, Figure 3B-18 MS piping material may be changed to SA 106 from SA 333	X			February 2013
Appendix 3D	Table 3D-2 Environmental Qualification Equipment List			X	February 2013
Appendix 3H	Appendix 3H Update description and properties of RCL lumped mass stick model	X			February 2013

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Table 3 Impact on DCD					
DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
Appendix 3I	Appendix 3I Update the reference to the MUAP 10006 Rev.3	X			February 2013
Appendix 3J	Appendix 3J Structural drawings		X	X	February 2013
Appendix 3K	Appendix 3K Tables 3K-2 thru 3K-4 Update layout change			X	February 2013
Appendix 3K	Appendix 3K Layout drawings(Figures 3K-1 thru 3K-12)		X		February 2013
6	6.2 Table 6.2-1-2 change 4,000 psi to 5,000 psi concrete	X			February 2013
6	6.2 Figures 6.2.1-5, 6.2.2-9, and 6.2.5-2 Layout drawings		X	X	February 2013
6	6.4 Figure 6.4-5 Layout drawing		X	X	February 2013
6	6.5 Figures 6.5-2 thru 6.5-9 Layout drawing		X	X	February 2013
8	8.2 Revise Layout drawing showing MT, UAT, RAT, and MV Buses (Figure 8.2-1)		X	X	February 2013
8	Table 8.3.1-3 thru 8.3.1-6 Revise Electrical Load Distribution Lists due to HVAC system change		X	X	February 2013
8	Table 8.3.1-9 Revise Electrical Equipment Location List to incorporate AIA countermeasures			X	February 2013

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Table 3 Impact on DCD					
DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
8	Technical Report: Qualification & Test Plan of Class 1E Gas Turbine Generator System (MUAP-07024, Rev. 2) Revise the Electrical Load List		X	X	February 2013
8	Technical Report: Onsite AC Power System Calculation (MUAP-09023, Rev.0) Revise the Electrical Load List		X	X	February 2013
8	Figure 8.3.1-4 Class 1E Equipment Layout		X	X	February 2013
9	Revise text for consistency with use of ESW pipe chase terminology	X			February 2013
9	9.1 Fuel Rack Configuration	X			December 2013
9	Figure 9.1.2-1 thru 9.1.2-2 New Fuel Rack Array and Spent Fuel Rack Array	X			December 2013
9	Figure 9.1.2-3 Location of Containment Racks		X		February 2013
9	Figure 9.1.4-1, Plan View of Light Load Handling System Figures 9.1.5-1 thru 9.1.5-3 Traveling Route Drawings		X		February 2013
9	9.2.1.2.2.5 Revise description consistent with that part of ESWPC (RB South wall) included in the standard plant design			X	February 2013
9	Tables 9.2.7-1 thru 9.2.7-2 Update Essential Chilled Water System Data due to HVAC system change		X	X	February 2013

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Table 3 Impact on DCD

DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
9	Technical Report: Safety-Related Air Conditioning, Heating, Cooling, and Ventilation Systems Calculations (MUAP-10020, Rev.1) Re-calculation of the heating, cooling and airflow requirement of the safety-related HVAC systems to incorporate the layout changes		X	X	February 2013
9	Tables 9.4.3-1 thru 9.4.5-1 Update AHU Equipment Design Data due to HVAC system change		X	X	February 2013
9	9.5 Appendix 9A/ figures Fire area drawing (Figure 9A-1 thru 17 and 27)		X	X	February 2013
9	9.5 Appendix 9A/ table 9A-2 Fire Hazard Analysis Summary		X	X	February 2013
9	9.5 Appendix 9A/ table 9A-3 Fire Zone/ Fire Area Inter face		X	X	February 2013
11	Figures 11.5-2 a through k Monitor Layout drawings		X	X	February 2013
12	Table 12.3-1 Update Wall Thicknesses		X	X	February 2013
12	Tables 12.3-3 and 12.3-10 Mission Dose		X	X	February 2013
12	Figure 12.3-1 thru Figure 12.3-6, Figure 12.3-9, and Figure 12.3-11 Radiation Zone Maps		X	X	February 2013
13	Technical Report: Design Certification Physical Security Element Review (UAP-SGI-08001, Rev.3) Revision/reconciliation based on the adjusted layout		X		July 2013
13	Technical Report: High Assurance Evaluation Assessment (UAP-SGI-08002, Rev.3) Revision/reconciliation based on the adjusted layout		X		June 2013

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Table 3 Impact on DCD

DCD Affected Chapter	Summary of Potential Changes	Cause of Change			DCD Markup Date to NRC
		Seismic Related Change	Layout Change	AIA /ESWPT Change	
15	Figure 15A-1 Revise Site Plan with Release and Intake Locations based on layout changes		X	X	February 2013
17	Table 17.4-1 Update Risk-significant SSCs		X	X	February 2013
19	Revise text for consistency with use of ESW pipe chase terminology	X			February 2013
19	19.1.5.2 and 19.1.6.3 Revise Internal Fire PRA		X	X	February 2013
19	19.1.5.3 and 19.1.6.3 Revise Internal Flooding PRA		X	X	February 2013
19	Technical Report: Probabilistic Risk Assessment (Level 1/2) (MUAP-07030, Rev.3) Incorporate the impact of the Layout design and seismic design		X	X	February 2013
19	Appendix 19A Aircraft Impact Assessment		X	X	February 2013

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Notes:

R3: Revisions to Letter (MHI Ref: UAP-HF-12082) from Y. Ogata (MHI) to U.S. NRC, "Final Closure Plan for US-APWR Seismic and Structural Analyses" dated March 31, 2012.

Cause of Change "Layout Change" includes two changes. One is a change related to a common basemat structure. The other is a change related to AIA/ESWPT enhancement.

Attachment 4

RAI Response Assessment Results

Table 4-1	Historical RAI Disposition
Table 4-2	Outstanding RAIs Previously On Hold
Table 4-3	Other Outstanding In-Process RAIs

RAI RESPONSE ASSESSMENT CRITERIA

The following criteria are intended to facilitate consistent categorization of previously submitted RAI responses with respect to the extent to which they are affected by design and methodology changes. There are three categories into which such RAI responses can be placed. These are:

A. No material effect

B. Editorial changes only

C. Material effect – Response revision required

Criteria to be used to determine the category assigned to an RAI response are listed below.

A. No material effect

An RAI response is category "A" when it meets one or more of the following criteria:

1. The RAI question is no longer applicable because its subject is no longer used by the DCD or its design documents (e.g., lumped-mass-stick-model usage for PCCV static analysis)[1]
2. DCD[2] changes do not alter the response or associated mark-ups, or they alter a response that was superseded by a subsequent response, or they alter mark-ups in a manner unrelated to the response.

Category A RAI responses require no revision.

B. Editorial changes only

An RAI response is category "B" when DCD changes alter response wording but not its material content. Examples of editorial changes:

- DCD changes alter a transitory condition previously reported in an RAI or change a reference number (e.g., status report, technical report number, table number, drawing number, ITAAC number, etc.)[3].
- DCD changes correct a spelling or grammatical error.
- DCD changes alter a provided status but do not materially alter DCD technical content, a statement of fact, or conformance to regulations or regulatory guidance.

Category B RAI responses require no revision.

C. Material effect – Response revision required

An RAI response is categorized as "C" when DCD changes affect the RAI response in a way that is characterized by one or more of the following[4]:

- DCD changes materially alter a statement of fact.
- DCD changes materially alter technical content.
- DCD changes materially alter conformance to regulations or regulatory guidance.
- DCD changes cause a response to no longer directly and accurately answer the RAI question.
- Materially altered RAI responses will be revised except when the altered content is clearly[5] redundant to content provided in a subsequent (later) RAI response.

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[1] When an RAI question is no longer applicable, its response and associated actions, including commitments, are withdrawn.

[2] The term "DCD" includes supporting documents, such as analyses or technical reports.

[3] Technical reports that are combined or reorganized may change number or revision designations.

[4] When follow-up RAI responses exist, only the most recent response to a question is considered.

[5] In this context, "clearly means the same or substantially similar. This specifically excludes inferential content, such as similar information that can be inferred by interpretation of tables or figures.

Table 4-1 Historical RAI Disposition						
RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification	
55	968	03.07.04-01		UAP-HF-08175 (09/01/08)	A2	
55	968	03.07.04-02		UAP-HF-08175 (09/01/08)	A2	R1
94	1491	02.05.04-1		UAP-HF-08272 (12/03/08)	C	
94	1491	02.05.04-2		UAP-HF-08272 (12/03/08)	C	
96	1498	02.05.02-1		UAP-HF-08272 (12/03/08)	A2	R1
211	1946	03.07.01-01	03.07.01-01	UAP-HF-09112 (03/25/09)	A1	
211	1946	03.07.01-01	03.07.01-02	UAP-HF-09112 (03/25/09)	A1	
211	1946	03.07.01-01	03.07.01-03	UAP-HF-09187 (04/23/09)	A1	
211	1946	03.07.01-01	03.07.01-04	UAP-HF-09112 (03/25/09)	A1	
211	1946	03.07.01-01	03.07.01-05	UAP-HF-09187 (04/23/09)	C	
211	1946	03.07.01-01	03.07.01-06	UAP-HF-09187 (04/23/09)	A1	
211	1946	03.07.01-01	03.07.01-07	UAP-HF-09187 (04/23/09)	C	
212	1950	03.07.02-001	03.07.02-01	UAP-HF-09188 (05/07/09)	C	
212	1950	03.07.02-001	03.07.02-02	UAP-HF-09113 (03/30/09)	C	
212	1950	03.07.02-001	03.07.02-03	UAP-HF-09188 (05/07/09)	A1	
212	1950	03.07.02-001	03.07.02-04	UAP-HF-09113 (03/30/09)	A1	
212	1950	03.07.02-001	03.07.02-05	UAP-HF-09188 (05/07/09)	C	
212	1950	03.07.02-001	03.07.02-06	UAP-HF-09188 (05/07/09)	C	
212	1950	03.07.02-001	03.07.02-07	UAP-HF-09113 (03/30/09)	C	
212	1950	03.07.02-001	03.07.02-08	UAP-HF-09113 (3/30/09)	A1	
212	1950	03.07.02-001	03.07.02-09	UAP-HF-09113 (03/30/09)	C	
212	1950	03.07.02-001	03.07.02-10	UAP-HF-09113 (03/30/09)	A1	
212	1950	03.07.02-001	03.07.02-11	UAP-HF-09113 (03/30/09)	A1	

Table 4-1 Historical RAI Disposition					
RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
212	1950	03.07.02-001	03.07.02-12	UAP-HF-09188 (05/07/09)	A2
212	1950	03.07.02-001	03.07.02-13	UAP-HF-09188 (05/07/09)	C
212	1950	03.07.02-001	03.07.02-14	UAP-HF-09188 (05/07/09)	C
212	1950	03.07.02-001	03.07.02-15	UAP-HF-09188 (05/07/09)	C
212	1950	03.07.02-001	03.07.02-16	UAP-HF-09188 (05/07/09)	C
212	1950	03.07.02-001	03.07.02-17	UAP-HF-09188 (05/07/09)	C
212	1950	03.07.02-001	03.07.02-18	UAP-HF-09188 (05/07/09)	A1
212	1950	03.07.02-001	03.07.02-19	UAP-HF-09188 (05/07/09)	A1
212	1950	03.07.02-001	03.07.02-20	UAP-HF-09188 (05/07/09)	C
212	1950	03.07.02-001	03.07.02-21	UAP-HF-09113 (03/30/09)	C
212	1950	03.07.02-001	03.07.02-22	UAP-HF-09113 (03/30/09)	A2
212	1950	03.07.02-001	03.07.02-23	UAP-HF-09113 (03/30/09)	C
212	1950	03.07.02-001	03.07.02-24	UAP-HF-09188 (05/07/09)	C
212	1950	03.07.02-001	03.07.02-25	UAP-HF-09113 (03/30/09)	C
212	1950	03.07.02-001	03.07.02-26	UAP-HF-09113 (03/30/09)	A2
212	1950	03.07.02-001	03.07.02-27	UAP-HF-09188 (05/07/09)	C
212	1950	03.07.02-001	03.07.02-28	UAP-HF-09113 (03/30/09)	A2
213	1951	03.07.03-01	03.07.03-01	UAP-HF-09114 (03/27/09)	A2
213	1951	03.07.03-01	03.07.03-02	UAP-HF-09114 (03/27/09)	A2
213	1951	03.07.03-01	03.07.03-03	UAP-HF-09189 (04/24/09)	A2
213	1951	03.07.03-01	03.07.03-04	UAP-HF-09189 (04/24/09)	A2
213	1951	03.07.03-01	03.07.03-05	UAP-HF-09114 (03/27/09)	C
213	1951	03.07.03-01	03.07.03-06	UAP-HF-09189 (04/24/09)	A2

R1

Table 4-1 Historical RAI Disposition

RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification	
213	1951	03.07.03-01	03.07.03-07	UAP-HF-09114 (03/27/09)	A2	
213	1951	03.07.03-01	03.07.03-08	UAP-HF-09114 (03/27/09)	A2	
213	1951	03.07.03-01	03.07.03-09	UAP-HF-09114 (03/27/09)	A2	
213	1951	03.07.03-01	03.07.03-10	UAP-HF-09114 (03/27/09)	A2	
213	1951	03.07.03-01	03.07.03-11	UAP-HF-09114 (03/27/09)	A2	
213	1951	03.07.03-01	03.07.03-12	UAP-HF-09189 (04/24/09)	A2	
213	1951	03.07.03-01	03.07.03-13	UAP-HF-09114 (03/27/09)	A2	
213	1951	03.07.03-01	03.07.03-14	UAP-HF-09189 (04/24/09)	A2	
213	1951	03.07.03-01	03.07.03-15	UAP-HF-09189 (04/24/09)	A2	
223	1996	03.08.01-01	03.08.01-01	UAP-HF-09161 (04/14/09)	A2	
223	1996	03.08.01-01	03.08.01-02	UAP-HF-09161 (04/14/09)	A2	
223	1996	03.08.01-01	03.08.01-03	UAP-HF-09161 (04/14/09)	A1	R1
223	1996	03.08.01-01	03.08.01-04	UAP-HF-09161 (04/14/09)	A2	
223	1996	03.08.01-01	03.08.01-05	UAP-HF-09161 (04/14/09)	A1	R1
223	1996	03.08.01-01	03.08.01-06	UAP-HF-09161 (04/14/09)	A2	
223	1996	03.08.01-01	03.08.01-07	UAP-HF-09161 (04/14/09)	C	
223	1996	03.08.01-01	03.08.01-08	UAP-HF-09161 (04/14/09)	C	
223	1996	03.08.01-01	03.08.01-09	UAP-HF-09161 (04/14/09)	A2	R1
223	1996	03.08.01-01	03.08.01-10	UAP-HF-09161 (04/14/09)	A1	
223	1996	03.08.01-01	03.08.01-11	UAP-HF-09161 (04/14/09)	C	
223	1996	03.08.01-01	03.08.01-12	UAP-HF-09194 (04/24/09)	A2	
223	1996	03.08.01-01	03.08.01-13	UAP-HF-09194 (04/24/09)	A2	
223	1996	03.08.01-01	03.08.01-14	UAP-HF-09161 (04/14/09)	A2	

Table 4-1 Historical RAI Disposition

RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
322	1999	03.08.03-01		UAP-HF-09278 (06/04/09) UAP-HF-09449 (9/17/09)	A2
322	1999	03.08.03-02		UAP-HF-09246 (06/04/09) UAP-HF-09449 (9/17/09)	A2
322	1999	03.08.03-03		UAP-HF-09246 (06/04/09) UAP-HF-09449 (9/17/09)	A2
322	1999	03.08.03-04		UAP-HF-09246 (06/04/09) UAP-HF-09449 (9/17/09)	A2
322	1999	03.08.03-05		UAP-HF-09246 (06/04/09) UAP-HF-09449 (9/17/09)	A2
322	1999	03.08.03-06		UAP-HF-09278 (06/04/09) UAP-HF-09449 (9/17/09)	A2
322	1999	03.08.03-07		UAP-HF-09278 (06/04/09) UAP-HF-09449 (9/17/09)	A2
322	1999	03.08.03-08		UAP-HF-09278 (06/04/09) UAP-HF-09449 (9/17/09)	C
322	1999	03.08.03-09		UAP-HF-09246 (06/04/09) UAP-HF-09449 (9/17/09)	A2
322	1999	03.08.03-10		UAP-HF-09246 (06/04/09) UAP-HF-09449 (9/17/09)	A2
322	1999	03.08.03-11		UAP-HF-09278 (06/04/09) UAP-HF-09449 (09/17/09)	A2
322	1999	03.08.03-12		UAP-HF-09246 (06/04/09) UAP-HF-09449 (9/17/09)	A2
322	1999	03.08.03-13		UAP-HF-09278 (06/04/09) UAP-HF-09449 (9/17/09)	A2

R1

Table 4-1 Historical RAI Disposition

RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
322	1999	03.08.03-14		UAP-HF-09278 (06/04/09) UAP-HF-09449 (9/17/09)	A2
322	1999	03.08.03-15		UAP-HF-09278 (06/04/09) UAP-HF-09449 (9/17/09)	A2
340	2004	03.08.05-01		UAP-HF-09363 (07/03/09)	A1
340	2004	03.08.05-02		UAP-HF-09363 (07/03/09)	A1
340	2004	03.08.05-03		UAP-HF-09363 (07/03/09)	A1
340	2004	03.08.05-04		UAP-HF-09363 (07/03/09)	A1
340	2004	03.08.05-05		UAP-HF-09363 (07/03/09)	A1
340	2004	03.08.05-06		UAP-HF-09363 (07/03/09)	A2
340	2004	03.08.05-07		UAP-HF-09363 (07/03/09)	A1
340	2004	03.08.05-08		UAP-HF-09363 (07/03/09)	A1
340	2004	03.08.05-09		UAP-HF-09363 (07/03/09)	C
340	2004	03.08.05-10		UAP-HF-09363 (07/03/09)	A1
340	2004	03.08.05-11		UAP-HF-09363 (07/03/09)	A1
340	2004	03.08.05-12		UAP-HF-09363 (07/03/09)	C
340	2004	03.08.05-13		UAP-HF-09363 (07/03/09)	C
340	2004	03.08.05-14		UAP-HF-09363 (07/03/09)	C
340	2004	03.08.05-15		UAP-HF-09363 (07/03/09)	A2
340	2004	03.08.05-16		UAP-HF-09363 (07/03/09)	A2
340	2004	03.08.05-17		UAP-HF-09363 (07/03/09)	C
340	2004	03.08.05-18		UAP-HF-09363 (07/03/09)	C
340	2004	03.08.05-19		UAP-HF-09363 (07/03/09)	A2
340	2004	03.08.05-20		UAP-HF-09363 (07/03/09)	A2

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Table 4-1 Historical RAI Disposition

RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
340	2004	03.08.05-21		UAP-HF-09363 (07/03/09)	A2
340	2004	03.08.05-22		UAP-HF-09363 (07/03/09)	A2
342	2000	03.08.04-01		UAP-HF-09360 (07/03/09)	C
342	2000	03.08.04-02		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-03		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-04		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-05		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-06		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-07		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-08		UAP-HF-09360 (07/3/09)	A2
342	2000	03.08.04-09		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-10		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-11		UAP-HF-09360 (07/03/09)	A1
342	2000	03.08.04-12		UAP-HF-09360 (07/03/09)	C
342	2000	03.08.04-13		UAP-HF-09360 (07/03/09)	C
342	2000	03.08.04-14		UAP-HF-09360 (07/03/09)	C
342	2000	03.08.04-15		UAP-HF-09360 (07/03/09)	C
342	2000	03.08.04-16		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-17		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-18		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-19		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-20		UAP-HF-09360 (07/03/09)	C
342	2000	03.08.04-21		UAP-HF-09360 (7/03/09)	A2

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Table 4-1 Historical RAI Disposition

RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
342	2000	03.08.04-22		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-23		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-24		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-25		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-26		UAP-HF-09360 (07/03/09)	A1
342	2000	03.08.04-27		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-28		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-29		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-30		UAP-HF-09360 (07/03/09)	A2
342	2000	03.08.04-31		UAP-HF-09360 (07/03/09)	A2
489	3516	03.04.02-05		UAP-HF-09575 (12/23/2009)	C
490	3732	03.08.01-02		UAP-HF-10033 (02/04/10)	C
490	3732	03.08.01-03		UAP-HF-10033 (02/04/10)	A2
490	3732	03.08.01-04		UAP-HF-10033 (02/04/10)	A2
490	3732	03.08.01-05		UAP-HF-10033 (02/04/10)	A1
490	3732	03.08.01-06		UAP-HF-10033 (02/04/10)	A2
490	3732	03.08.01-07		UAP-HF-10033 (02/04/10)	A2
490	3732	03.08.01-08		UAP-HF-10033 (02/04/10)	C
490	3732	03.08.01-09		UAP-HF-10033 (02/04/10)	C
490	3732	03.08.01-10		UAP-HF-10033 (02/04/10)	C
491	3733	03.08.03-16		UAP-HF-10062 (03/03/10)	A2
491	3733	03.08.03-17		UAP-HF-10062 (03/03/10)	A2
491	3733	03.08.03-18		UAP-HF-10062 (03/03/10)	A2

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Table 4-1 Historical RAI Disposition

RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification	
491	3733	03.08.03-19		UAP-HF-10062 (03/03/10)	A2	
491	3733	03.08.03-20		UAP-HF-10062 (03/03/10)	A2	
491	3733	03.08.03-21		UAP-HF-10062 (03/03/10)	A2	
491	3733	03.08.03-22		UAP-HF-10062 (03/03/10)	A2	
491	3733	03.08.03-23		UAP-HF-10062 (03/03/10)	A2	
491	3733	03.08.03-24		UAP-HF-10062 (03/03/10)	A2	
491	3733	03.08.03-25		UAP-HF-10062 (03/03/10)	A2	R1
493	3983	03.07.03-02		UAP-HF-10019 (01/28/10)	A2	
493	3983	03.07.03-03		UAP-HF-10019 (01/28/10)	A2	
493	3983	03.07.03-04		UAP-HF-10019 (01/28/10)	A2	
493	3983	03.07.03-05		UAP-HF-10019 (01/28/10)	A2	
494	3978	03.07.01-02		UAP-HF-10022 (01/29/10)	C	
494	3978	03.07.01-03		UAP-HF-10022 (01/29/10)	A2	R1
494	3978	03.07.01-04		UAP-HF-10022 (01/29/10)	A2	
495	3980	03.07.02-02		UAP-HF-10029 (02/02/10)	C	
495	3980	03.07.02-03		UAP-HF-10029 (02/02/10)	A2	
495	3980	03.07.02-04		UAP-HF-10029 (02/02/10)	C	
495	3980	03.07.02-05		UAP-HF-10029 (02/02/10)	C	R1
496	3735	03.08.05-23		UAP-HF-10032 (02/04/10)	A2	
496	3735	03.08.05-24		UAP-HF-10032 (02/04/10)	A1	R1
496	3735	03.08.05-25		UAP-HF-10032 (02/04/10)	A1	
496	3735	03.08.05-26		UAP-HF-10032 (02/04/10)	C	
496	3735	03.08.05-27		UAP-HF-10032 (02/04/10)	C	

Table 4-1 Historical RAI Disposition

RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification	
496	3735	03.08.05-28		UAP-HF-10032 (02/04/10)	A1	
496	3735	03.08.05-29		UAP-HF-10032 (02/04/10)	A1	
496	3735	03.08.05-30		UAP-HF-10032 (02/04/10)	A1	
496	3735	03.08.05-31		UAP-HF-10032 (02/04/10)	C	
496	3735	03.08.05-32		UAP-HF-10032 (02/04/10)	C	
496	3735	03.08.05-33		UAP-HF-10032 (02/04/10)	C	
496	3735	03.08.05-34		UAP-HF-10032 (02/04/10)	A2	
496	3735	03.08.05-35		UAP-HF-10032 (02/04/10)	A2	
497	3734	03.08.04-32		UAP-HF-10047 (02/19/10)	A2	
497	3734	03.08.04-33		UAP-HF-10047 (02/19/10)	C	
497	3734	03.08.04-34		UAP-HF-10047 (02/19/10)	A2	
497	3734	03.08.04-35		UAP-HF-10047 (02/19/10)	A2	
497	3734	03.08.04-36		UAP-HF-10047 (02/19/10)	A2	
497	3734	03.08.04-37		UAP-HF-10047 (02/19/10) UAP-HF-11016 (01/27/11)	A1	R1
497	3734	03.08.04-38		UAP-HF-10047 (02/19/10)	A1	R1
497	3734	03.08.04-39		UAP-HF-10047 (02/19/10) UAP-HF-11016 (01/27/11)	C	R1
497	3734	03.08.04-40		UAP-HF-10047 (02/19/10)	C	R1
497	3734	03.08.04-41		UAP-HF-10047 (02/19/10)	A2	
497	3734	03.08.04-42		UAP-HF-10047 (02/19/10)	C	
497	3734	03.08.04-43		UAP-HF-10047 (02/19/10)	A2	
497	3734	03.08.04-44		UAP-HF-10047 (02/19/10) UAP-HF-11016 (01/27/11)	A1	

Table 4-1 Historical RAI Disposition						
RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification	
497	3734	03.08.04-45		UAP-HF-10047 (02/19/10)	A2	
497	3734	03.08.04-46		UAP-HF-10047 (02/19/10)	A2	
497	3734	03.08.04-47		UAP-HF-10047 (02/19/10)	A2	
538	4320	03.07.04-03		UAP-HF-10088 (03/30/10)	C	
542	4262	03.07.02-006 (-33)		UAP-HF-10086 (03/30/10)	A1	R1
542	4262	03.07.02-007 (-34)		UAP-HF-10086 (03/30/10)	C	
542	4262	03.07.02-008 (-35)		UAP-HF-11195 (06/29/11)	C	
546	4345	03.04.02-6		UAP-HF-10105 (04/16/10)	C	
602	4665	03.07.01-05		UAP-HF-10219 (07/27/10)	A1	R1
603	4666	03.07.02-009 (-36)		UAP-HF-10217 (07/27/10)	A2	
603	4666	03.07.02-010 (-37)		UAP-HF-10238 (08/30/10)	A1	
625	4924	03.07.02-011		UAP-HF-10300 (11/04/10)	A1	
625	4924	03.07.02-012		UAP-HF-10300 (11/04/10)	A1	
625	4924	03.07.02-013		UAP-HF-10300 (11/04/10)	A1	
625	4924	03.07.02-014		UAP-HF-10300 (11/04/10)	A1	
625	4924	03.07.02-015		UAP-HF-10300 (11/04/10)	A1	
625	4924	03.07.02-016		UAP-HF-10300 (11/04/10)	A1	
625	4924	03.07.02-017		UAP-HF-10300 (11/04/10)	A1	
625	4924	03.07.02-018		UAP-HF-10300 (11/04/10)	A1	
625	4924	03.07.02-019		UAP-HF-10300 (11/04/10)	A1	
625	4924	03.07.02-020		UAP-HF-10300 (11/04/10)	C	
625	4924	03.07.02-021		UAP-HF-10300 (11/04/10)	A2	
625	4924	03.07.02-022		UAP-HF-10300 (11/04/10)	A1	

Table 4-1 Historical RAI Disposition						
RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification	
625	4924	03.07.02-023		UAP-HF-10300 (11/04/10)	C	
625	4924	03.07.02-024		UAP-HF-10300 (11/04/10)	C	
632	5041	03.07.04-04		UAP-HF-10280 (10/19/10)	C	
643	4967	03.07.01-06 (-12)		UAP-HF-10308 (11/11/10)	C	
643	4967	03.07.01-07 (-13)		UAP-HF-10308 (11/11/10)	C	
643	4967	03.07.01-08 (-14)		UAP-HF-10308 (11/11/10)	A2	
643	4967	03.07.01-09 (-15)		UAP-HF-10308 (11/11/10)	C	
643	4967	03.07.01-10 (-16)		UAP-HF-10308 (11/11/10)	A2	R1
657	5135	03.08.05-36		UAP-HF-10351 (12/28/10)	C	
657	5135	03.08.05-37		UAP-HF-10351 (12/28/10)	A2	
657	5135	03.08.05-38		UAP-HF-10351 (12/28/10)	C	
657	5135	03.08.05-39		UAP-HF-10351 (12/28/10)	C	
657	5135	03.08.05-40		UAP-HF-10351 (12/28/10)	C	
657	5135	03.08.05-41		UAP-HF-10351 (12/28/10)	C	
658	5130	03.08.04-48		UAP-HF-10352 (12/28/10)	C	R1
658	5130	03.08.04-49		UAP-HF-10352 (12/28/10)	A2	
659	5133	03.07.01-11 (-17)		UAP-HF-10353 (12/28/10)	C	
659	5133	03.07.01-12 (-18)		UAP-HF-10353 (12/28/10)	C	R1
660	5134	03.07.02-025 (-52)		UAP-HF-10355 (12/28/10)	C	
660	5134	03.07.02-026 (-53)		UAP-HF-10355 (12/28/10)	C	
660	5134	03.07.02-027 (-54)		UAP-HF-10355 (12/28/10)	C	
660	5134	03.07.02-028 (-55)		UAP-HF-10355 (12/28/10)	A1	
660	5134	03.07.02-029 (-56)		UAP-HF-10355 (12/28/10)	A2	R1

Table 4-1 Historical RAI Disposition

RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
660	5134	03.07.02-030 (-57)		UAP-HF-10355 (12/28/10)	C
660	5134	03.07.02-031 (-58)		UAP-HF-10355 (12/28/10)	C
660	5134	03.07.02-032 (-59)		UAP-HF-10355 (12/28/10)	C
660	5134	03.07.02-033 (-60)		UAP-HF-10355 (12/28/10)	C
660	5134	03.07.02-034 (-61)		UAP-HF-10355 (12/28/10)	C
660	5134	03.07.02-035 (-62)		UAP-HF-10355 (12/28/10)	C
660	5134	03.07.02-036 (-63)		UAP-HF-10355 (12/28/10)	C
660	5134	03.07.02-037 (-64)		UAP-HF-10355 (12/28/10)	C
660	5134	03.07.02-038 (-65)		UAP-HF-10355 (12/28/10)	C
660	5134	03.07.02-039 (-68)		UAP-HF-10355 (12/28/10)	C
661	5129	03.08.01-11 (-24)		UAP-HF-10357 (12/28/10)	A1
661	5129	03.08.01-12 (-25)		UAP-HF-10357 (12/28/10)	A2
661	5129	03.08.01-13 (-26)		UAP-HF-10357 (12/28/10)	C
662	5131	03.08.03-26		UAP-HF-10358 (12/28/10)	C
662	5131	03.08.03-27		UAP-HF-10358 (12/28/10)	A2
662	5131	03.08.03-28		UAP-HF-10358 (12/28/10)	A2
662	5131	03.08.03-29		UAP-HF-10358 (12/28/10)	C
662	5131	03.08.03-30		UAP-HF-10358 (12/28/10)	C
662	5131	03.08.03-31		UAP-HF-10358 (12/28/10)	A2
662	5131	03.08.03-32		UAP-HF-10358 (12/28/10)	C
676	5209	03.08.03-33		UAP-HF-11045 (02/23/11)	A2
676	5209	03.08.03-34		UAP-HF-11045 (02/23/11)	A2
676	5209	03.08.03-35		UAP-HF-11045 (02/23/11)	C

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Table 4-1 Historical RAI Disposition					
RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
709	5489	03.07.01-13 (-17)		UAP-HF-11111 (04/19/11)	C
766	5819	03.07.02-040		UAP-HF-11392 (11/16/11)	C
766	5819	03.07.02-041		UAP-HF-11249 (08/01/11)	C
766	5819	03.07.02-042		UAP-HF-11393 (11/16/11)	C
766	5819	03.07.02-043		UAP-HF-11393 (11/16/11)	C
766	5819	03.07.02-044		UAP-HF-11392 (11/16/11)	C
766	5819	03.07.02-045		UAP-HF-11393 (11/16/11)	C
766	5819	03.07.02-046		UAP-HF-11392 (11/16/11)	C
766	5819	03.07.02-047		UAP-HF-11249 (08/01/11)	C
766	5819	03.07.02-048		UAP-HF-11393 (11/16/11)	C
766	5819	03.07.02-049		UAP-HF-11393 (11/16/11)	C
766	5819	03.07.02-050		UAP-HF-11392 (11/16/11)	C
766	5819	03.07.02-051		UAP-HF-11393 (11/16/11)	C
766	5819	03.07.02-052		UAP-HF-11392 (11/16/11)	C
766	5819	03.07.02-053		UAP-HF-11249 (08/01/11)	C
766	5819	03.07.02-054		UAP-HF-11393 (11/16/11)	C
766	5819	03.07.02-055		UAP-HF-11393 (11/16/11)	C
766	5819	03.07.02-056		UAP-HF-11249 (08/01/11)	C
766	5819	03.07.02-057		UAP-HF-11393 (11/16/11)	C
766	5819	03.07.02-058		UAP-HF-11249 (08/01/11)	C
766	5819	03.07.02-059		UAP-HF-11393 (11/16/11)	C
766	5819	03.07.02-060		UAP-HF-11392 (11/16/11)	C
766	5819	03.07.02-061		UAP-HF-11392 (11/16/11)	C

Table 4-1 Historical RAI Disposition					
RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
766	5819	03.07.02-062		UAP-HF-11249 (08/01/11)	C
766	5819	03.07.02-063		UAP-HF-11393 (11/16/11)	C
766	5819	03.07.02-064		UAP-HF-11249 (08/01/11)	C
766	5819	03.07.02-065		UAP-HF-11249 (08/01/11)	C
766	5819	03.07.02-066		UAP-HF-11392 (11/16/11)	C
766	5819	03.07.02-067		UAP-HF-11249 (08/01/11)	C
767	5821	03.08.04-50		UAP-HF-11393 (11/16/11)	C
767	5821	03.08.04-51		UAP-HF-11392 (11/16/11)	C
768	5830	03.08.01-14		UAP-HF-11231 (7/25/11)	A2 R1
776	5851	03.07.02-068		UAP-HF-11262 (08/12/11)	C
776	5851	03.07.02-069		UAP-HF-11262 (08/12/11)	C
776	5851	03.07.02-070		UAP-HF-11281 (08/30/11)	C
776	5851	03.07.02-071		UAP-HF-11262 (08/12/11)	C
776	5851	03.07.02-072		UAP-HF-11281 (08/30/11)	C
776	5851	03.07.02-073		UAP-HF-11262 (08/12/11)	C
776	5851	03.07.02-074		UAP-HF-11281 (08/30/11)	C
776	5851	03.07.02-075		UAP-HF-11281 (08/30/11)	C
776	5851	03.07.02-076		UAP-HF-11281 (08/30/11)	C
776	5851	03.07.02-077		UAP-HF-11262 (08/12/11)	C
776	5851	03.07.02-078		UAP-HF-11281 (08/30/11)	C
776	5851	03.07.02-079		UAP-HF-11281 (08/30/11)	C
776	5851	03.07.02-080		UAP-HF-11281 (08/30/11)	C
776	5851	03.07.02-081		UAP-HF-11262 (08/12/11)	C

Table 4-1 Historical RAI Disposition

RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
776	5851	03.07.02-082		UAP-HF-11281 (08/30/11)	C
776	5851	03.07.02-083		UAP-HF-11262 (08/12/11)	C
776	5851	03.07.02-084		UAP-HF-11281 (08/30/11)	C
791	5864	03.07.02-085		UAP-HF-11282 (08/30/11)	C
798	5876	03.07.01-14		UAP-HF-11296 (09/07/11)	C
798	5876	03.07.01-15		UAP-HF-11296 (09/07/11)	C
798	5876	03.07.01-16		UAP-HF-11296 (09/07/11)	C
798	5876	03.07.01-17		UAP-HF-11421 12/7/11	C
799	5877	03.07.03-06		UAP-HF-11297 (09/07/11)	A2
799	5877	03.07.03-07		UAP-HF-11347 (10/07/11)	A2
799	5877	03.07.03-08		UAP-HF-11297 (09/07/11)	A2
799	5877	03.07.03-09		UAP-HF-11297 (09/07/11)	A2
799	5877	03.07.03-10		UAP-HF-11347 (10/07/11)	A2
799	5877	03.07.03-11		UAP-HF-11347 (10/07/11)	A2
800	5879	03.07.02-086		UAP-HF-11298 (09/07/11)	A2
800	5879	03.07.02-087		UAP-HF-11298 (09/07/11)	A2
800	5879	03.07.02-088		UAP-HF-11298 (09/07/11)	A2
800	5879	03.07.02-089		UAP-HF-11298 (09/07/11)	A2
800	5879	03.07.02-090		UAP-HF-11372 (11/1/11)	A2 R1
810	5874	03.07.02-091		UAP-HF-11402 (11/22/11)	C
810	5874	03.07.02-092		UAP-HF-11402 (11/22/11)	C
810	5874	03.07.02-093		UAP-HF-11402 (11/22/11)	C R1

Table 4-1 Historical RAI Disposition						
RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification	
810	5874	03.07.02-094		UAP-HF-11402 (11/22/11)	A2	
810	5874	03.07.02-095		UAP-HF-11402 (11/22/11)	C	R1
810	5874	03.07.02-096		UAP-HF-11402 (11/22/11)	A2	
810	5874	03.07.02-097		UAP-HF-11324 (09/22/11)	A2	
810	5874	03.07.02-098		UAP-HF-11402 (11/22/11)	C	
810	5874	03.07.02-099		UAP-HF-11324 (09/22/11)	A2	
810	5874	03.07.02-100		UAP-HF-11402 (11/22/11)	C	
810	5874	03.07.02-101		UAP-HF-11402 (11/22/11)	A2	
810	5874	03.07.02-102		UAP-HF-11324 (09/22/11)	C	
810	5874	03.07.02-103		UAP-HF-11402 (11/22/11)	C	
810	5874	03.07.02-104		UAP-HF-11402 (11/22/11)	A2	
810	5874	03.07.02-105		UAP-HF-11402 (11/22/11)	A2	R1
810	5874	03.07.02-106		UAP-HF-11324 (09/22/11)	A2	
810	5874	03.07.02-107		UAP-HF-11324 (09/22/11)	A2	
810	5874	03.07.02-108		UAP-HF-11413 (11/30/11)	C	
812	5983	03.07.02-109		UAP-HF-11325 (09/22/11)	C	
850	6002	03.07.01-19		UAP-HF-11417 12/1/11	C	R1
850	6002	03.07.01-20		UAP-HF-11417 12/1/11	A2	
850	6002	03.07.01-21		UAP-HF-11417 12/1/11	A2	
850	6002	03.07.01-22		UAP-HF-11417 12/1/11	A2	
850	6002	03.07.01-23		UAP-HF-11417 12/1/11	C	

Table 4-1 Historical RAI Disposition						
RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification	
850	6002	03.07.01-24		UAP-HF-11417 12/1/11	C	R1
850	6002	03.07.01-25		UAP-HF-11417 12/1/11	C	
850	6002	03.07.01-26		UAP-HF-11417 12/1/11	C	
850	6002	03.07.01-27		UAP-HF-11417 12/1/11	C	
850	6002	03.07.01-28		UAP-HF-11417 12/1/11	C	
850	6002	03.07.01-29		UAP-HF-11417 12/1/11	C	
850	6002	03.07.01-30		UAP-HF-11417 12/1/11	C	
850	6002	03.07.01-31		UAP-HF-11417 12/1/11	A2	R1
850	6002	03.07.01-32		UAP-HF-11417 12/1/11	C	
858	6126	03.08.03-36		UAP-HF-12051 2/28/12	A2	R1
858	6126	03.08.03-37		UAP-HF-12051 2/28/12	A2	
858	6126	03.08.03-38		UAP-HF-12051 2/28/12	A2	
858	6126	03.08.03-39		UAP-HF-12051 2/28/12	A2	
858	6126	03.08.03-40		UAP-HF-12051 2/28/12	A2	
858	6126	03.08.03-41		UAP-HF-12051 2/28/12	A2	
858	6126	03.08.03-42		UAP-HF-12051 2/28/12	A2	
858	6126	03.08.03-43		UAP-HF-12051 2/28/12	A2	
858	6126	03.08.03-44		UAP-HF-12051 2/28/12	A2	
858	6126	03.08.03-45		UAP-HF-12051 2/28/12	A2	
858	6126	03.08.03-46		UAP-HF-12051 2/28/12	A2	
858	6126	03.08.03-47		UAP-HF-12051 2/28/12	A2	
858	6126	03.08.03-48		UAP-HF-12051 2/28/12	A2	

Table 4-1 Historical RAI Disposition

RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
858	6126	03.08.03-49		UAP-HF-12051 2/28/12	A2
858	6126	03.08.03-50		UAP-HF-12051 2/28/12	A2
858	6126	03.08.03-51		UAP-HF-12051 2/28/12	A2
858	6126	03.08.03-52		UAP-HF-12051 2/28/12	A2
858	6126	03.08.03-53		UAP-HF-12051 2/28/12	A2
858	6126	03.08.03-54		UAP-HF-12051 2/28/12	A2
858	6126	03.08.03-55		UAP-HF-12051 2/28/12	A2
879	6196	03.08.04-52		UAP-HF-12054 2/29/12 UAP-HF-12076 3/26/12	A2
886	6202	03.07.01-33		UAP-HF-12050 2/24/12	C
894	6270	03.08.03-56		UAP-HF-12083 4/3/12	A2
894	6270	03.08.03-57		UAP-HF-12083 4/3/12	A2
894	6270	03.08.03-58		UAP-HF-12083 4/3/12	A2
894	6270	03.08.03-59		UAP-HF-12083 4/3/12	A2
894	6270	03.08.03-60		UAP-HF-12083 4/3/12	A2
894	6270	03.08.03-61		UAP-HF-12083 4/3/12	A2
894	6270	03.08.03-62		UAP-HF-12083 4/3/12	A2
894	6270	03.08.03-63		UAP-HF-12083 4/3/12	A2
894	6270	03.08.03-64		UAP-HF-12083 4/3/12	A2
894	6270	03.08.03-65		UAP-HF-12083 4/3/12	A2
894	6270	03.08.03-66		UAP-HF-12083 4/3/12	A2
905	6311	03.08.03-67		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-68		UAP-HF-12108 5/16/12	A2

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Table 4-1 Historical RAI Disposition					
RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
905	6311	03.08.03-69		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-70		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-71		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-72		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-73		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-74		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-75		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-76		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-77		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-78		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-79		UAP-HF-12108 5/16/12	A2
905	6311	03.08.03-80		UAP-HF-12108 5/16/12	A2
909	6315	03.07.02-180		UAP-HF-12124 6/5/12	A2
909	6315	03.07.02-181		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-182		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-183		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-184		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-185		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-186		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-187		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-188		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-189		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-190		UAP-HF-12124 6/5/12	C

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Table 4-1 Historical RAI Disposition					
RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
909	6315	03.07.02-191		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-192		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-193		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-194		UAP-HF-12124 6/5/12	A2
909	6315	03.07.02-195		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-196		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-197		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-198		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-199		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-200		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-201		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-202		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-203		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-204		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-205		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-206		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-207		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-208		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-209		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-210		UAP-HF-12124 6/5/12	C
909	6315	03.07.02-211		UAP-HF-12124 6/5/12	C
931	6467	03.08.03-81		UAP-HF-12197 8/20/12	A2
931	6467	03.08.03-82		UAP-HF-12197 8/20/12	A2

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Table 4-1 Historical RAI Disposition					
RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)	Submittal Letter	Classification
931	6467	03.08.03-83		UAP-HF-12197 8/20/12	A2
931	6467	03.08.03-84		UAP-HF-12197 8/20/12	A2
931	6467	03.08.03-85		UAP-HF-12197 8/20/12	A2
931	6467	03.08.03-86		UAP-HF-12197 8/20/12	A2
931	6467	03.08.03-87		UAP-HF-12197 8/20/12	A2
931	6467	03.08.03-88		UAP-HF-12197 8/20/12	A2
931	6467	03.08.03-89		UAP-HF-12197 8/20/12	A2
939	6334	03.07.01-34		UAP-HF-12207 7/20/12	A2
939	6334	03.07.01-35		UAP-HF-12207 7/20/12	A2
939	6334	03.07.01-36		UAP-HF-12207 7/20/12	C
939	6334	03.07.01-37		UAP-HF-12207 7/20/12	A2
939	6334	03.07.01-38		UAP-HF-12207 7/20/12	A2
939	6334	03.07.01-39		UAP-HF-12207 7/20/12	A2
940	6532	03.07.01-40		UAP-HF-12207 7/20/12	C
940	6532	03.07.01-41		UAP-HF-12207 7/20/12	C
940	6532	03.07.01-42		UAP-HF-12207 7/20/12	A2
940	6532	03.07.01-43		UAP-HF-12207 7/20/12	A2

R1

Notes:

R1: Revisions to Letter (MHI Ref: UAP-HF-12082) from Y. Ogata (MHI) to U.S. NRC, " Final Closure Plan for US-APWR Seismic and Structural Analyses" dated March 31, 2012.

Table 4-2
Outstanding RAIs Previously On Hold

RAI Letter No.	eRAI No.	Question No.
821	5984	03.07.01-18
852	6003	03.07.02-110
852	6003	03.07.02-111
852	6003	03.07.02-112
852	6003	03.07.02-113
852	6003	03.07.02-114
852	6003	03.07.02-115
852	6003	03.07.02-116
852	6003	03.07.02-117
852	6003	03.07.02-118
852	6003	03.07.02-119
852	6003	03.07.02-120
852	6003	03.07.02-121
852	6003	03.07.02-122
852	6003	03.07.02-123
852	6003	03.07.02-124
852	6003	03.07.02-125
852	6003	03.07.02-126
852	6003	03.07.02-127
852	6003	03.07.02-128
852	6003	03.07.02-129
852	6003	03.07.02-130
852	6003	03.07.02-131
852	6003	03.07.02-132
852	6003	03.07.02-133
852	6003	03.07.02-134
852	6003	03.07.02-135
852	6003	03.07.02-136
852	6003	03.07.02-137
852	6003	03.07.02-138
853	6029	03.07.02-139
853	6029	03.07.02-140
853	6029	03.07.02-141
853	6029	03.07.02-142
853	6029	03.07.02-143
853	6029	03.07.02-144
853	6029	03.07.02-145
853	6029	03.07.02-146
853	6029	03.07.02-147
853	6029	03.07.02-148

Table 4-2
Outstanding RAIs Previously On Hold

RAI Letter No.	eRAI No.	Question No.
853	6029	03.07.02-149
853	6029	03.07.02-150
854	6088	03.07.02-151
854	6088	03.07.02-152
854	6088	03.07.02-153
854	6088	03.07.02-154
854	6088	03.07.02-155
854	6088	03.07.02-156
854	6088	03.07.02-157
854	6088	03.07.02-158
854	6088	03.07.02-159
854	6088	03.07.02-160
854	6088	03.07.02-161
854	6088	03.07.02-162
854	6088	03.07.02-163
855	6090	03.08.05-42
855	6090	03.08.05-43
855	6090	03.08.05-44
855	6090	03.08.05-45
856	6094	03.07.02-164
856	6094	03.07.02-165
856	6094	03.07.02-166
856	6094	03.07.02-167
856	6094	03.07.02-168
856	6094	03.07.02-169
856	6094	03.07.02-170
856	6094	03.07.02-171
856	6094	03.07.02-172
856	6094	03.07.02-173
856	6094	03.07.02-174
856	6094	03.07.02-175
856	6094	03.07.02-176
856	6094	03.07.02-177
868	6156	03.07.02-178
868	6156	03.07.02-179

Table 4-3 Other Outstanding In-Process RAIs						
RAI Letter No.	**eRAI No.**	**Question No.**	**Question No. (Sub-number)**	**Submittal Letter**	**Response Date**	
950	6575	03.07.03-12	N/A		September 14, 2012	R1

Notes:
R1: Revisions to Letter (MHI Ref: UAP-HF-12082) from Y. Ogata (MHI) to U.S. NRC, " Final Closure Plan for US-APWR Seismic and Structural Analyses" dated March 31, 2012.