



MITSUBISHI HEAVY INDUSTRIES, LTD.
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TOKYO, JAPAN

September 21, 2007

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Attention: Mr. David B. Matthews

Project No.0751
MHI Ref: UAP-HF-07117

Reference: Letter from S, R, Monarque (NRC) to C, K, Paulson (MNES), REQUEST FOR ADDITIONAL INFORMATION ON THE US-APWR NEUTRON REFLECTOR REFLOODING TEST PLAN, August 29, 2007

Subject: Response to Request for Additional Information on the US-APWR Neutron Reflector Reflooding Test Plan.

With this letter, Mitsubishi Heavy Industries, LTD. (MHI) transmits to the U.S. Nuclear Regulatory Commission (NRC) the document entitled "Response to Request for Additional Information on the US-APWR Neutron Reflector Reflooding Test Plan" in response to the NRC's request.

As indicated in the enclosed materials, these documents contain information that MHI considers proprietary, and therefore should be withheld from disclosure pursuant to 10 C.F.R. § 2.390 (a)(4) and 10 C.F.R § 9.17 (a)(4) as trade secrets and commercial or financial information which is privileged or confidential. Non-proprietary versions of the documents are also being submitted in this package (Enclosure 3). In the non-proprietary versions, the proprietary information, bracketed in the proprietary version, is replaced by the designation "[]".

This letter includes copies of the proprietary versions (Enclosure 2), copies of the non-proprietary version (Enclosure 3) and the Affidavit of Masahiko Kaneda (Enclosure 1) which identifies the reasons MHI respectfully requests that all materials designated as "Proprietary" in Enclosure 2 be withheld from disclosure pursuant to 10 C.F.R. § 2.390 (a)(4) and 10 C.F.R.§ 9.17(a)(4).

Please contact Dr. C. Keith Paulson, Senior Technical Manager, Mitsubishi Nuclear Energy Systems, Inc. if the NRC has questions concerning any aspect of the submittals. His contact information is below.

DOB1
NRO

Sincerely,



Masahiko Kaneda,
General Manager- APWR Promoting Department
Mitsubishi Heavy Industries, LTD.

Enclosures:

- Enclosure1 - Affidavit of Masahiko Kaneda (non-proprietary)
- Enclosure2 - Response to Request for Additional Information on the US-APWR Neutron Reflector Reflooding Test Plan (UAP-HF-07117) (proprietary version)
- Enclosure3 - Response to Request for Additional Information on the US-APWR Neutron Reflector Reflooding Test Plan (UAP-HF-07117) (non-proprietary version)

CC: S. M. Coffin
S. R. Monarque
J. A. Ciocco
J. W. Chung
C. K. Paulson

Contact Information

C. Keith Paulson, Senior Technical Manager
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MITSUBISHI HEAVY INDUSTRIES, LTD.

AFFIDAVIT

I, Masahiko Kaneda, state as follows:

1. I am General Manager, APWR Promoting Department, of Mitsubishi Heavy Industries, LTD ("MHI"), and have been delegated the function of reviewing MHI's US-APWR documentation to determine whether it contains information that should be withheld from disclosure pursuant to 10 C.F.R. § 2.390 (a)(4) and 10 C.F.R. § 9.17(a)(4) as trade secrets and commercial or financial information which is privileged or confidential.
2. In accordance with my responsibilities, I have reviewed the enclosed documents dated September 21, 2007, entitled "Response to Request for Additional Information on the US-APWR Neutron Reflector Reflooding Test Plan" and have determined that portions of the documents contain proprietary information that should be withheld from public disclosure. Those pages containing proprietary information are identified with the label "Proprietary" on the top of the page and proprietary information has been bracketed with an open and closed bracket as shown here "[]". The first pages of the documents indicate that all information identified as "Proprietary" should be withheld from public disclosure pursuant to 10 C.F.R. § 2.390 (a)(4).
3. The information identified as proprietary in the enclosed document has in the past been, and will continue to be, held in confidence by MHI and its disclosure outside the company is limited to regulatory bodies, customers and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and is always subject to suitable measures to protect it from unauthorized use or disclosure.
4. The basis for holding the referenced information confidential is that it describes the unique information concerning the test, developed by MHI and not used in the exact form by any of MHI's competitors. This information was developed at significant cost to MHI, since it required the performance of Research and Development, detailed design for its software and hardware extending over several years.
5. The referenced information is being furnished to the Nuclear Regulatory Commission ("NRC") in confidence and solely for the purpose of information to the NRC staff.
6. The referenced information is not available in public sources and could not be gathered readily from other publicly available information. Other than through the provisions in paragraph 3 above, MHI knows of no way the information could be lawfully acquired by organizations or individuals outside of MHI.
7. Public disclosure of the referenced information would assist competitors of MHI in their design of new nuclear power plants without incurring the costs or risks associated with the design of the subject systems. Therefore, disclosure of the information contained in the referenced documents would have the following negative impacts on the competitive position of MHI in the U.S. nuclear plant market:

- A. Loss of competitive advantage due to the costs associated with development of the test method for confirming the enhanced design of the US-APWR. Providing public access to such information permits competitors to duplicate or mimic the test method for their plant designs without incurring the associated costs.
- B. Loss of competitive advantage of the US-APWR created by benefits of enhanced plant safety, and reduced operation and maintenance costs associated with the enhanced US-APWR design to be confirmed by the associated test.

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information and belief.

Executed on this 21st day of September, 2007.



Masahiko Kaneda,
General Manager- APWR Promoting Department
Mitsubishi Heavy Industries, LTD.

Enclosure 3

UAP-HF-07117, Rev.0

US-APWR

**Response to Request for Additional Information
on the US-APWR Neutron Reflector Reflooding Test Plan
September 2007
(Non-Proprietary Version)**

This is a non-proprietary version of the MHI document, UAP-HF-07117, Rev.0, with all proprietary information removed.

Portions of the document where proprietary information has been removed are identified by the designation "[]".

**Response to Request for Additional Information on
"US-APWR Neutron Reflector Reflooding Test Plan, UAP-HF-07081-P Rev.0"**

Non-Proprietary version

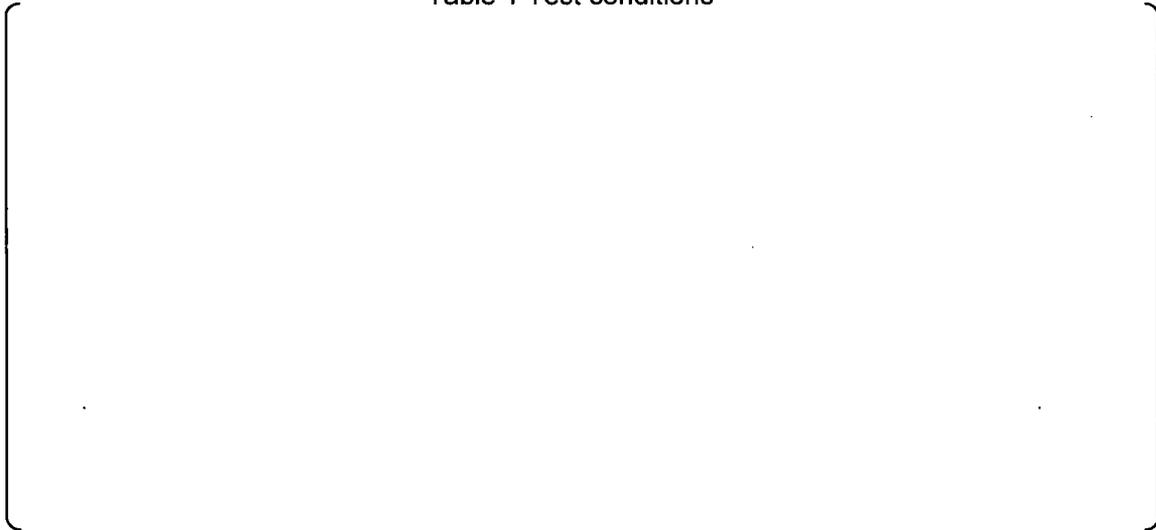
Section 5.2, "Calibration," 6.0, "Test Procedure," and 7.0, "Evaluation Items of Test Results," describe the actions relating to the testing of the neutron reflector. MHI is requested to provide the number and length of test runs that will be performed on the neutron reflector test section, and provide a numerical value for the terms 'Nominal value' and 'Range' shown on Table 2. In addition, MHI is requested to indicate whether these tests will be steady state. For Section 5.2, step (3), please clarify the first sentence.

- 1) *MHI is requested to provide the number and length of test runs that will be performed on the neutron reflector test section, and provide a numerical value for the terms 'Nominal value' and 'Range' shown on Table 2.*

Response

[] test cases including a reproducibility test are planned. The numerical values of test conditions are shown in Table 1.

Table 1 Test conditions



The flooding and measurement are completed after the inner wall is quenched throughout the full length of the flow hole. The time length of flooding will be less than [] minutes.

2) *In addition, MHI is requested to indicate whether these tests will be steady state.*

Response

These tests will be performed in the transient state.

The thermal hydraulic behavior through the NR flow hole in these tests is in transient state because high temperature of NR metal is decreased by the flooding water. However, some test conditions such as flooding rate, inlet water temperature and upper plenum pressure are maintained constant in these tests.

3) *For Section 5.2, step (3), please clarify the first sentence.*

Response

To detach measuring instruments in the test section is difficult because the metal block with thermo couples for metal and fluid temperature measurement shown in Fig.1 is welded directly to the NR metal.

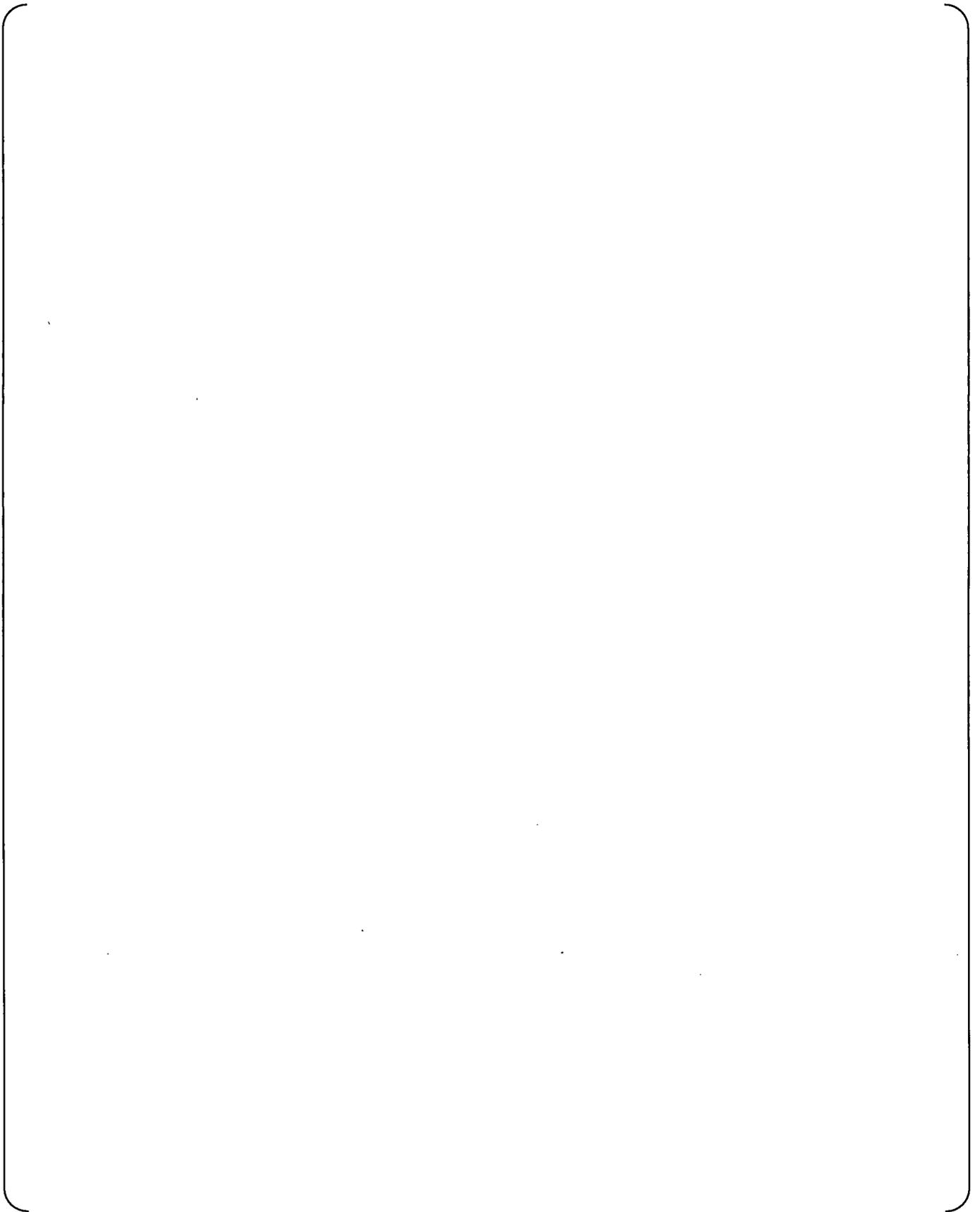


Figure 1 Test section