MITSUBISHI HEAVY INDUSTRIES, LTD.
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TOKYO, JAPAN

July 14, 2009

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

Attention: Mr. Jeffrey A. Ciocco

Docket No. 52-021
MHI Ref: UAP-HF-09374

Subject: MHI's Responses to US-APWR DCD RAI No. 389-2919 Revision 1

Reference: [1] "Request for Additional Information No. 389-2919 Revision 1, SRP Section: 09.01.02 – New and Spent Fuel Storage - Design Certification and New License Applicants, Application Section: 9.1.2," dated June 15, 2009.

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "Response to Request for Additional Information No. 389-2919 Revision 1".

Enclosure 1 is the responses to 1 question that is contained within Reference [1].

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.

Sincerely,

Y. Ogata

Yoshiki Ogata,
General Manager- APWR Promoting Department
Mitsubishi Heavy Industries, LTD.

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NRO

Enclosures:

1. Responses to Request for Additional Information No. 389-2919 Revision 1

CC: J. A. Ciocco
C. K. Paulson

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Enclosure 1

UAP-HF-09374
Docket No. 52-021

Responses to Request for Additional Information
No. 389-2919 Revision 1

July 2009

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

07/14/2009

US-APWR Design Certification

Mitsubishi Heavy Industries, Ltd.

Docket No. 52-021

RAI NO.: NO. 389-2919 REVISION 1

SRP SECTION: 9.1.2 – New and Spent Fuel Storage

APPLICATION SECTION: 9.1.2

DATE OF RAI ISSUE: 06/15/2009

QUESTION NO.: 09.01.02-24

Background

RAI 09.01.02-18 (Reference 1) requested that the applicant explain special preparation of surfaces in the spent fuel pit to ensure that (1) corrosion products and fission products do not accumulate, (2) surfaces can easily be decontaminated, and (3) fuel assemblies will not be damaged.

In the applicant's response (Reference 2), information was supplied about the SFP liner material and surfaces. In addition, the New and Spent Fuel racks were assured to be free of burrs, sharp corners, edges, and weld beads or splatter which could damage fuel assembly surfaces. Both of these explanations partially answer the original request, and satisfy provisions of the acceptance criteria (ANSI/ANS-57.2). However, the applicant does not address the surface finish of the racks themselves, which must have a minimum smoothness (ANSI/ANS-57.2, paragraph 6.4.2.11).

Requested Information

1. State the acceptable surface finish requirements for storage rack materials which must come into contact with fuel assemblies.

References

1. "Request for Additional Information No. 248-2178 Revision 1, SRP Section: 09.01.02 – New and Spent Fuel Storage, Application Section: DCD Tier 2, Section 9.1.2" dated December 18, 2008. (ADAMS Accession No. ML090620646)

2. Letter from Yoshiki Ogata, MHI, to NRC dated March 30, 2009; Docket No. 52-021 MHI Ref: UAP-HF-09128; Subject: MHI's Response to US-APWR DCD RAI No. 248-2178 Revision 1 (ADAMS Accession No. ML090910646)

ANSWER:

All interior surfaces of fuel racks which may come into contact with the fuel assembly are smooth (125 Arithmetric Average) in accordance with the requirement of ANSI/ANS-57.2 paragraph 6.4.2.11. This ensures a clean, smooth surface without scale.

DCD Section 9.1.2.2.1 "New Fuel Storage" and Section 9.1.2.2.2 "Spent Fuel Storage" will be updated to add this detail.

Impact on DCD

1) Tier-2 DCD Section 9.1.2.2.1 "New Fuel Storage", last sentence in 4th paragraph will be updated as follows:

> "Surfaces that come into contact with the fuel assemblies are made of annealed austenitic stainless steel**, and are smooth (125AA) in accordance with the requirement of ANSI/ANS-57.2**."

2) Tier-2 DCD Section 9.1.2.2.2 "Spent Fuel Storage", first sentence in 12th paragraph will be updated as follows:

> "Material used in rack construction are compatible with SFP environment, and surfaces that com into contact with the fuel assemblies are made of annealed austenitic stainless steel**, and are smooth (125AA) in accordance with the requirement of ANSI/ANS-57.2**."

Impact on COLA

There is no impact on the COLA.

Impact on PRA

There is no impact on the PRA.