



MITSUBISHI HEAVY INDUSTRIES, LTD.

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June 4, 2014

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

Attention: Mr. William Ward

Docket No. 52-021
MHI Ref: UAP-HF-14043

Subject: MHI's Revised Responses to US-APWR DCD RAI No. 777-5776 (SRP 18)

- Reference:** 1) "Request for Additional Information No. 777-5776, SRP Section: 18. - Human Factors Engineering, Application Section: 18.12" dated July 6, 2011 (ML111870408).
- 2) "MHI's Response to US-APWR DCD RAI No. 777-5776 (SRP 18)," UAP-HF-11275, dated August 24, 2011 (ML11238A04).

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "Revised Responses to Request for Additional Information No. 777-5776."

Enclosed is the response to the RAI contained within Reference 1.

This revised response supersedes the previously submitted response to RAI 777-5776 Questions 18-126 and 18-128 (Reference 2).

Please contact Mr. Joseph Tapia, General Manager of Regulatory Services, Mitsubishi Nuclear Energy Systems, Inc. if the NRC has questions concerning any aspect of these submittals. His contact information is provided below.

Sincerely,



Atsushi Kumaki,
Manager, APWR Project Group
Global Nuclear Project Department
Nuclear Energy Systems Division
Energy & Environment Domain
Mitsubishi Heavy Industries, Ltd.

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K120

Enclosures:

1. Revised Responses to Request for Additional Information No. 777-5776

CC: W. Ward
J. Tapia

Contact Information

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Docket No. 52-021
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Enclosure 1

UAP-HF-14043
Docket No. 52-021

Revised Responses to Request for Additional Information
No. 777-5776

June 2014

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

6/4/2014

**US-APWR Design Certification
Mitsubishi Heavy Industries
Docket No. 52-021**

RAI NO.: NO. 777-5776 REVISION 3
SRP SECTION: 18 – HUMAN FACTORS ENGINEERING
APPLICATION SECTION: 18.12 – HUMAN PERFORMANCE MONITORING
DATE OF RAI ISSUE: 07/06/2011

QUESTION NO. : 18-126

NUREG-0711, Section 13.4, Criterion 4 suggests that a plan be developed for utilizing different sources of data when actual plant performance data cannot be used.

It is unclear how the DCD addresses criterion 4. Failing to address at a high level does not prepare for adequate planning at more specific IP level.

Clarify how this criterion is met in the existing document or update the DCD to include it.

ANSWER:

Human performance monitoring applies after the HSI has been turned over to the COL holder. Human performance monitoring will be performed to address NUREG-0711 criterion by the COL holder. DCD Section 18.12 will include a new COL item.

Impact on DCD

DCD Section 18.12 will be revised as shown in Attachment 1.

Impact on R-COLA

The COL applicant needs to develop human performance monitoring program.

Impact on PRA

There is no impact on the PRA.

Impact on Technical /Topical Report

There is no impact to any Technical /Topical Report.

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

6/4/2014

**US-APWR Design Certification
Mitsubishi Heavy Industries
Docket No. 52-021**

RAI NO.: NO. 777-5776 REVISION 3
SRP SECTION: 18 – HUMAN FACTORS ENGINEERING
APPLICATION SECTION: 18.12 – HUMAN PERFORMANCE MONITORING
DATE OF RAI ISSUE: 07/06/2011

QUESTION NO. : 18-128

The guidance in NUREG-0711 Section 13.4, Criterion 3 indicates that feedback should be provided in a timely manner.

DCD Tier 2 section 18.2.3 and DCD Tier 1, Section 2.9, Table 2.9-1 both mention that periodic reports will be filed. Stating that the reports are periodic does not ensure that they are timely.

Please describe how the HPM ensures that these periodic reports will be made in a timely manner.

ANSWER:

Human performance monitoring applies after the HSI has been turned over to the COL holder. Human performance monitoring will be performed to address NUREG-0711 criterion by the COL holder. DCD Section 18.12 will include a new COL item.

Impact on DCD

DCD Section 18.12 will be revised as shown in Attachment 1.

Impact on R-COLA

The COL applicant needs to develop human performance monitoring program.

Impact on PRA

There is no impact on the PRA.

Impact on Technical /Topical Report

There is no impact to any Technical /Topical Report.

This completes MHI's responses to the NRC's questions.

18.12 Human Performance Monitoring

Human performance monitoring applies after the HSI has been turned over to the COL holder for fuel load and continues throughout plant operation. Monitoring of human performance and the potential interaction between degrading human performance and the HSIS is within the scope of other plant programs (such as the Corrective Action Program) and is, therefore, the responsibility of the COL holder.

DCD_18-126
-S01

DCD_18-128
-S01

18.12.1 Objectives and Scope

COL 18.12(1) The COL Applicant is to develop the Human Performance Monitoring Program

18.12.2 References

None

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