# MITSUBISHI HEAVY INDUSTRIES, LTD.

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TOKYO, JAPAN

April 3, 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-09154

#### Subject: MHI's Responses to US-APWR DCD RAI No. 261-2165 Revision 0

Reference: 1) "REQUEST FOR ADDITIONAL INFORMATION 261-2165 REVISION 0 SRP Section: 14.03.12 - Physical Security Hardware - Inspections, Tests, Analyses, and Acceptance Criteria Application Section: Section 2.12 of the DCD," dated March 4, 2009.

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "Responses to Request for Additional Information No. 261-2165 Revision 0."

Enclosed are the responses to 7 RAIs 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,

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

Enclosure:

1. Responses to Request for Additional Information No. 261-2165 Revision 0

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

Contact Information

C. Keith Paulson, Senior Technical Manager Mitsubishi Nuclear Energy Systems, Inc. 300 Oxford Drive, Suite 301 Monroeville, PA 15146 E-mail: ck\_paulson@mnes-us.com Telephone: (412) 373-6466

# Docket No. 52-021 MHI Ref: UAP-HF-09154

# Enclosure 1

# UAP-HF-09154 Docket No. 52-021

# Responses to Request for Additional Information No. 261-2165 Revision 0

# April 2009

4/3/2009

# **US-APWR** Design Certification

### Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: NO. 261-2165 REVISION 0

**SRP SECTION:** 

#### 2. 261-2165 REVISION U

14.03.12 - PHYSICAL SECURITY HARDWARE - INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA

APPLICATION SECTION: SECTION 2.12 OF THE DCD

DATE OF RAI ISSUE: 3/4/2009

# QUESTION NO.: 14.03.12-12

ITAAC Item 3 in Table 2.12-1

The design commitment does not state what the observation is of people and/or vehicles, but the ITA and AC both refer to the observation of people. Is this just for the observation of people only, or does it also include vehicles?

#### **ANSWER:**

The design commitment is to provide an isolation zone that allows 20 feet of observation on either side of the physical barrier at the protected area perimeter (other than for permanent building walls that are immediately adjacent, or an integral part of, the protected area barrier), which is for the observation of abnormal presence or activity of persons or vehicles as reflected in ITAAC Item 5 in Table 2.12-1.

# Impact on DCD

There is not impact on the DCD

#### Impact on COLA

There is no impact on the COLA.

#### Impact on PRA

4/3/2009

# **US-APWR Design Certification**

### **Mitsubishi Heavy Industries**

#### Docket No. 52-021

#### RAI NO.: NO. 261-2165 REVISION 0

SRP SECTION:

# 14.03.12 - PHYSICAL SECURITY HARDWARE - INSPECTIONS, **TESTS, ANALYSES, AND ACCEPTANCE CRITERIA**

**SECTION 2.12 OF THE DCD APPLICATION SECTION:** 

**DATE OF RAI ISSUE: 3/4/2009** 

#### QUESTION NO.: 14.03.12-13

ITAAC Item 4 in Table 2.12-1

The design commitment should state something like the following: 'The intrusion detection system can detect and initiate alarms for penetrations or attempted penetrations of the protected area barrier.'

The ITA would be better stated as the following: 'Test, inspections, or combination of tests and inspections verify that the intrusion detection system can detect and initiate alarms for penetrations or attempted penetrations of the protected area barrier with the alarms annunciating at both the Central and Secondary Alarm Stations.'

The AC would be better stated as the following: 'A report exists and concludes that the intrusion detection system can detect and initiate alarms for penetrations or attempted penetrations of the protected area barrier with the alarms annunciating at both the Central and Secondary Alarm Stations.'

#### **ANSWER:**

Mitsubishi believes that this ITAAC, as currently worded, adequately describes the design commitment, the ITA and the AC. The ITAAC provides for an intrusion detection system that can detect penetration or attempted penetration of the protected area boundary and annunciate alarms at both the Central and Secondary Alarm Stations.

Furthermore, the Security ITAAC in Table 2.12-1 in Tier 1 of the US-APWR Design Control Document, Revision 1, are based on the physical security ITAAC developed in a series of meetings between industry representatives and the NRC Staff during which agreement was reached between the industry and the staff on a generic set of security ITAAC. The Nuclear Energy Institute formally submitted this mutually acceptable set of ITAAC to the NRC by letter dated December 19, 2008. See Letter from Russell J. Bell, Director New Plant Licensing, NEI, to Scott A. Morris, Deputy Director, Division of Nuclear Security and Incident Response, NRC (December 19, 2008). The NRC has just issued a letter formally endorsing these mutually acceptable ITAAC with some minor changes which do not affect this ITAAC (or the other ITAACs

# 14.03.12-2

addressed in these RAIs). See Letter from Scott A. Morris, Deputy Director for Reactor Security Office of Nuclear Security and Incident Response, NRC, to Russell J. Bell, Director New Plant Licensing, NEI, (March 26, 2009). Accordingly, the NRC has determined that the wording of this ITAAC is acceptable.

# Impact on DCD

There is not impact on the DCD

# Impact on COLA

There is no impact on the COLA.

# Impact on PRA

4/3/2009

# US-APWR Design Certification

#### Mitsubishi Heavy Industries

Docket No. 52-021

#### RAI NO.: NO. 261-2165 REVISION 0

SRP SECTION:

# 14.03.12 - PHYSICAL SECURITY HARDWARE - INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA

APPLICATION SECTION: SECTION 2.12 OF THE DCD

DATE OF RAI ISSUE: 3/4/2009

## QUESTION NO.: 14.03.12-14

ITAAC Item 5 in Table 2.12-1

The design commitment is concerned with the observation of abnormal presence or activity of persons or vehicles. Neither the ITA nor AC state that the observation is of abnormal presence or activity of persons or vehicles.

#### **ANSWER:**

Mitsubishi believes that this ITAAC, as currently worded, adequately describes the design commitment, which is to provide illumination sufficient to permit observation of abnormal presence or activity of persons or vehicles, the ITA, which will inspect whether sufficient illumination is provided for such observation, and the AC, which provides alternative acceptance criteria for determining the acceptability of the illumination for such observation. Furthermore, as discussed in response to RAI 14.03.12-13 above, the US-APWR physical security ITAAC are based on the mutually acceptable physical security ITAAC developed by industry representatives and the NRC Staff, which the NRC has formally endorsed. Accordingly, the NRC has determined that the wording of this ITAAC is acceptable.

#### Impact on DCD

There is not impact on the DCD

#### Impact on COLA

There is no impact on the COLA.

#### Impact on PRA

4/3/2009

#### US-APWR Design Certification

#### Mitsubishi Heavy Industries

Docket No. 52-021

#### RAI NO.: NO. 261-2165 REVISION 0

SRP SECTION:

#### 7. 201-2103 REVISION 0

SECTION: 14

#### 14.03.12 - PHYSICAL SECURITY HARDWARE - INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA

APPLICATION SECTION: SECTION 2.12 OF THE DCD

DATE OF RAI ISSUE: 3/4/2009

#### QUESTION NO.: 14.03.12-15

ITAAC Item 6 in Table 2.12-1

The design commitment and ITA are concerned with 'external walls, whereas the AC is concerned only with 'walls'. Establish agreement on this concern across the three components of this ITAAC.

The ITA is concerned with 'windows in the walls', but the design commitment and AC are not. Determine if windows should be included in the ITA, if so include them also in the design commitment and AC.

## ANSWER:

As reflected in the design commitment, the commitment is only to design the <u>external</u> walls, doors, ceilings and floors in the main control room, central alarm station, and the last access control function to be bullet resistant. Thus, the reference to walls in the acceptance criteria would only be concerned with external walls in order to determine whether this commitment is met.

Furthermore, the design commitment is to provide bullet resistant enclosures for these functions. Therefore, the commitment includes any windows or penetrations through the external walls, doors, ceilings and floors of these structures. This is implicit in the wording of the design commitment, for a wall, door, ceiling or floor that contains windows or penetrations that are not bullet resistant would not be bullet resistant as required by the design commitment.

For the reasons stated above, Mitsubishi believes that this ITAAC, as currently worded, adequately describes the design commitment, the ITA and the AC. Furthermore, as discussed in response to RAI 14.03.12-13 above, the US-APWR physical security ITAAC are based on the mutually acceptable physical security ITAAC developed by industry representatives, which the NRC has formally endorsed. Accordingly, the NRC has determined that the wording of this ITAAC is acceptable.

# Impact on DCD

There is not impact on the DCD

# Impact on COLA

There is no impact on the COLA.

# Impact on PRA

4/3/2009

### US-APWR Design Certification

#### Mitsubishi Heavy Industries

## Docket No. 52-021

#### RAI NO.: NO. 261-2165 REVISION 0

SRP SECTION:

#### . 261-2165 REVISION U

ION: 14.03.12 - PHYSICAL SECURITY HARDWARE - INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA

APPLICATION SECTION: SECTION 2.12 OF THE DCD

DATE OF RAI ISSUE: 3/4/2009

#### QUESTION NO.: 14.03.12-16

ITAAC Item 8.a in Table 2.12-1

The AC would be better stated as the following: 'A report exists and concludes that access control points are established and control access of personnel and vehicles into the protected area.'

#### ANSWER:

The actual control of access of personnel and vehicles into the protected area is part of the operational physical security program, which is not to be tested and accepted by the ITAAC. Rather, it is the design and construction of physical security systems that are to be accepted by the ITAAC. Therefore, the acceptance criteria is written so as to require the physical configuration of the access point, as designed and constructed, to be to be capable of controlling access into the protected area.

Impact on DCD

There is not impact on the DCD

Impact on COLA

There is no impact on the COLA.

Impact on PRA

4/3/2009

# **US-APWR** Design Certification

### Mitsubishi Heavy Industries

Docket No. 52-021

#### RAI NO.: NO. 261-2165 REVISION 0

**SRP SECTION:** 

14.03.12 - PHYSICAL SECURITY HARDWARE - INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA

APPLICATION SECTION: SECTION 2.12 OF THE DCD

DATE OF RAI ISSUE: 3/4/2009

#### QUESTION NO.: 14.03.12-17

ITAAC Item 8.b in Table 2.12-1

The design commitment infers that the access control points detect the firearms, explosives, and incendiary devices, whereas the ITA and AC correctly state that it is the detection equipment at those access control points that detects those items.

#### **ANSWER:**

The design commitment is to design control access points to be capable of detecting firearms, explosives, and incendiary devices. The use of detection equipment is how this design function will be accomplished and there is no contradiction between the design commitment and the ITA and the AC.

#### Impact on DCD

There is not impact on the DCD

#### Impact on COLA

There is no impact on the COLA.

#### Impact on PRA

4/3/2009

### **US-APWR Design Certification**

#### **Mitsubishi Heavy Industries**

### Docket No. 52-021

#### RAI NO.: NO. 261-2165 REVISION 0

**SRP SECTION:** 

# 14.03.12 - PHYSICAL SECURITY HARDWARE - INSPECTIONS, **TESTS, ANALYSES, AND ACCEPTANCE CRITERIA**

**APPLICATION SECTION: SECTION 2.12 OF THE DCD** 

DATE OF RAI ISSUE: 3/4/2009

#### QUESTION NO.: 14.03.12-18

ITAAC Item 14 in Table 2.12-1

The following is a better way to state the basis for annunciation of alarms: onsite security alarm annunciation including alarm location, type, circuit, date, and time, and also false alarms, alarm checks, and tamper indication.'

#### **ANSWER:**

Mitsubishi believes that this ITAAC, as currently worded, adequately describes the design commitment, the ITA and the AC. Furthermore, as discussed in response to RAI 14.03.12-13 above, the US-APWR physical security ITAAC are based on the mutually acceptable physical security ITAAC developed by industry representatives and the NRC Staff, which the NRC has formally endorsed. Accordingly, the NRC has determined that the wording of this ITAAC is acceptable.

Impact on DCD

There is not impact on the DCD

Impact on COLA

There is no impact on the COLA.

Impact on PRA