

REQUEST FOR ADDITIONAL INFORMATION NO. 187-2008 REVISION 1

2/9/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 11.04 - Solid Waste Management System

Application Section: 11.4

QUESTIONS for Balance of Plant Branch 2 (ESBWR/ABWR) (SBPB)

11.04-6

Regulatory Guide 1.143 provides guidance on how to meet the requirements of 10 CFR 50.34(a), and 10 CFR 50, Appendix A, Criterion 60 and 61 with respect to design, construction, installation, and testing the structures, systems, and components of radioactive waste management facilities. Regulatory Position 5, "Classification of Radwaste Systems for Design Purposes," in RG 1.143 discusses the three safety classes, or classifications, for radwaste management facilities. These classes are RW-IIa (High Hazard), RW-IIb (Hazardous), and RW-IIc (non-Safety).

There is no discussion of these safety classes in Tier 1 Section 2.7.4 or Tier 2 Section 11.4. Provide additional information in the DCD to justify how the guidance in Regulatory Position 5 are met.

11.04-7

10 CFR 50.34a requires the applicant for design approval to submit a description of the equipment for the control of gaseous and liquid effluents and for the maintenance and use of equipment installed in radioactive waste systems.

- A) In DCD Tier 2, Section 11.4.4, "Component Description," the applicant states that "A description of the SWMS components, including the design of the tanks, pumps, and de-watering mobile unit, is shown in Table 11.4-4. The capacities, materials of construction, and applicable codes are included." Specifications and applicable codes for the breakpot tank are not included in Section 11.4.4 and Table 11.4-4 of the application. Provide additional information concerning the description and specifications of the breakpot tank which are to be included in the DCD.
- B) DCD Figure 11.4-2 shows a "breakup pipe" but there is no mention of this component in the Section 11.4 text. Also, the breakpot tank is not included on this figure. Provide information regarding the breakup pipe in the DCD text, and include the breakpot tank on the figure.
- C) DCD Figure 11.4-2 shows a "breakup pipe" with a line coming off the top routed to the holdup tank, as well as a line off the bottom titled "drain to waste holdup tank." Verify that these lines are both correctly labeled as being routed to the holdup tank.

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11.04-8

SRP Section 11.4 states that definition of the boundary of the SWMS, beginning at the interface from plant systems provided for the collection of process streams and radioactive wastes to the point of controlled discharges to the environment or to within plant facilities used for the storage of radioactive wastes and mixed wastes should be provided. Provide in DCD Section 11.4 a definition of the SWMS boundaries.

11.04-9

In Section 11.4.2.1.1 it is stated that: "The COL applicant is to include descriptions of wastes other than normally accumulated non-radioactive wastes such as wasted activated carbon from GWMS charcoal beds, solid wastes coming from component (Steam generator, Reactor vessel etc.) replacement activities, and other unusual cases." However, this was not included as a COL information item. Justify why this information was not included as a COL information item.

11.04-10

COL Information Item 11.4(5) states: "The current design provides collection and packaging of dry active wastes for offsite shipment and/or disposal. Depending on site-specific requirements, the COL applicant can send the wastes for offsite laundry facility processing and/or bring in a mobile compaction unit for volume reduction. The temporary mobile compaction subsystem is a COL item." It is unclear what information the COL applicant is to provide in the COL application. Revise this COL information item to clarify specifically what the COL applicant is expected to provide.

11.04-11

COL Information Item 11.4(7) states: "The COL applicant can adopt solid waste processing facility (e.g. dewatering system, compactor for reducing waste volume) depending on site-specific requirements. These facilities are COL item." It is unclear what information the COL applicant is to provide in the COL application. Revise this COL information item to clarify specifically what the COL applicant is expected to provide.

11.04-12

In Section 11.4.2.4 it is stated that "The spent resin filling and dewatering operations have level control setpoints. The ranges, setpoints, and references for these instruments are to be developed in the detailed design phase and are not provided in this DCD." However, this was not included as a COL information item. Justify why this information was not included as a COL information item.

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11.04-13

Clarify if the “sump pump” referred to in Section 11.4.4.2.1 is the same component as the “sludge pump” in Table 11.4-4. Address this inconsistency in terminology and revise DCD Tier 2, Section 11.4 and associated table accordingly.

11.04-14

In Section 11.4.2.2.2 it is stated that “The spent activated carbon from the LWMS is normally sent directly to disposal containers.” In the DCD, provide a description of how this direct transfer is performed.

11.04-15

Figure 11.4-2 shows a line from “mobile dewatering equipment” routed to the “plant vent.” Provide in the DCD a description of the specific disposition of the gaseous exhaust from the fill head during transfer and dewatering activities.

11.04-16

Section 11.4.2.2.1 refers to “closed captioned television (CCTV)” – Verify that this acronym is not actually “closed circuit television,” and update the DCD accordingly.

11.04-17

GDC 63 requires that radioactive waste systems be able to detect conditions that may result in excessive radiation levels in waste storage locations and to initiate appropriate safety actions. In Section 11.4.7 the applicant states that a list of alarm instruments and location of readouts is presented in Table 11.4-6, “Instrument Indication and Alarm Information Page.” Review of Table 11.4-6 found that alarm locations were not identified. Provide in the DCD additional information relating to the location of alarms.