
REVISED RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

APR1400 Design Certification

Korea Electric Power Corporation / Korea Hydro & Nuclear Power Co., LTD

Docket No. 52-046

RAI No.: 193-8181
SRP Section: 14.02 – Initial Plant Test Program
Application Section: 14.02
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Question No. 14.02-16

10 CFR 50 Appendix I as it relates to the effluent release to a member of the public, in being able to monitor and control effluent release.

10 CFR 20 Appendix B as it relates to monitoring and complying with the effluent concentration limits specified and Criterion XI, "Test Control."

Staff review of DCD Tier 2, Revision 0, Section 11.4, "Solid Waste Management System, "(SWMS) and 14.2.12.1.104, "Solid Waste Management System Test," found that information on the Test Method and Acceptance Criteria for the SWMS was not fully described. Section 11.4 describes verification of manual and automatic system controls on key system alarms such as high-level alarms associated with the solid waste system simultaneously activated in the MCR, and verification of other alarms such as radiation monitor and isolation valves to monitor and control effluent discharge to the environment and other indications; however, verification of manual and automatic response to normal control, alarms, and indications are not identified in Section 14.2.12.1.104 Acceptance Criteria. Please revise the DCD to include this information and provide a markup.

Response

KHNP has reviewed the subject question and understands the staff's request. KHNP is in the process of upgrading the test plans presented in Section 14.2 of the DCD. This effort is focused on adding additional SSCs that are important to safety and risk significant as well as increasing the level of detail described in the DCD for test prerequisites, test methods and acceptance criteria for the various tests. It has been determined that the actions to be taken as a result of this question is within the scope of the upgrade effort. Therefore, KHNP will address the noted items in the upgrade effort, which is scheduled to be completed by February 1, 2016. A revised response to this question that incorporates the results of the upgrade effort will be submitted to the NRC after completion.

Response - (Rev. 1)

KHNP expanded the verification of manual and automatic response to normal control, alarms, and indications in the upgraded Objectives, Test Methods and Acceptance Criteria of Section 14.2.12.1.104. However, the added acceptance criteria that system alarms shall be operated per design will be further clarified to the specific indications that are available in the Radwaste Control Room. The added information includes the following:

- Indications for tank level, tank pressure and demineralized water inlet flow rate of the Low- Activity Spent Resin Tank shall be indicated in the Radwaste Control Room per Table 11.4- 6.
- Indication for tank level of the Spent Resin Long-Term Storage Tank shall be indicated in the Radwaste Control Room per Table 11.4-6.
- High alarms for tank level of the Low-Activity Spent Resin Tank and Spent Resin Long-Term Storage Tank shall be indicated in the Radwaste Control Room per Table 11.4-6.

Impact on DCD

DCD Section 14.2.12.1.104 will be revised as indicated in the attached markup.

Impact on PRA

There is no impact on the PRA.

Impact on Technical Specifications

There is no impact on the Technical Specifications.

Impact on Technical/Topical/Environmental Reports

There is no impact on any Technical, Topical, or Environmental Report.

APR1400 DCD TIER 2

5.0 ACCEPTANCE CRITERIA

5.1 ~~The SWMS operates as~~ Specified valves shall be manually opened and closed by their respective hand switches located at Information FPD on the radwaste control console and at local.

5.2 Specified valve strokes full open and full close in response to FIK-003 located at information FPD on the radwaste control console, and status is properly indicated.

5.3 ~~System alarms shall be operated per design.~~

5.4 New resin tank shall be capable of charging the specified equipment with new resin.

5.5 Spent resin shall be transferred from specified equipment to low activity spent resin Tanks.

5.6 Specified valves fail in the required position on loss of control power and loss of air, and return to the connect position on restoration of air or control power. Inoperable status indicates properly.

5.7 Wet solid wastes shall be stabilized or dewatered and satisfied 10 CFR 61.56 in described in Section 11.4.1.4.

5.8 No leakage shall be satisfied in at where fluid carrying is proceed between mobile processing equipment and permanently installed plant subsystems.

Indications for tank level, tank pressure and demineralized water inlet flow rate of Low-Activity Spent Resin Tank shall be indicated in the Radwaste Control Room per Table 11.4-6.

5.9 Indication for tank level of the Spent Resin Long-Term Storage Tank shall be indicated in Radwaste Control Room per Table 11.4-6.

5.10 High alarms for tank level of the Low-Activity Spent Resin Tank and Spent Resin Long-Term Storage Tank shall be indicated in the Radwaste Control Room per Table 11.4-6.

14.2.12.1.105 Gaseous Waste Management System Test

1.0 ~~OBJECTIVE~~ OBJECTIVES

1.1 To demonstrate the ~~ability~~ manual/auto operation of GRS equipment and components including valves