
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.: 195-8182
SRP Section: 14.02 – Initial Plant Test Program –Design Certification and New License Applicants
Application Section: 14.2
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Question No. 14.02-18

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

10 CFR 20 Appendix B as it relates to monitoring and complying with the effluent concentration limits specified.

Staff review of DCD Tier 2, Revision 0, Sections 11.5 and 14.2.12.1.106 found that information on the Test Method and Acceptance Criteria in the ITP for the PERMS was not fully described. Section 11.5 describes verification of manual and automatic system controls on key system alarms such as high-level alarms associated with the PERMS 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 14.2.12.1.106 Acceptance Criteria. Please revise the DCD to include this information and provide a markup.

Response

KHNP will expand the description in the Acceptance Criteria for the PERMS ITP to address the system's monitoring and signal generation when the radiation level detected exceeds the preset levels in accordance with the system design criteria and description in DCD Section 11.5.

Impact on DCD

The upgraded DCD Tier 2, Section 14.2.12.106, (submitted by KHNP in Letter MKD/NW-16-0156L, dated February 24, 2016), will be revised as indicated in the Attachment.

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

3.0 TEST METHOD

- 3.1 Using the check source and external test equipment, verify calibration and operation of the monitor.
- 3.2 Check the self-testing feature of the monitor.
- 3.3 Where applicable, verify proper control actuation by the monitor and record the response time. Simulate a high-radiation signal to the appropriate radiation monitors to verify proper control actuations.
- 3.4 Verify proper alarm actuation in the main control room. Simulate a high-radiation signal to the radiation monitors to verify proper alarm actuations in the main control room or local control panel, as appropriate.

4.0 DATA REQUIRED

- 4.1 Monitor response to check source
- 4.2 Technical data associated with the source
- 4.3 Signal levels necessary to cause alarm actuation
- 4.4 Response time of the monitor to perform control functions

continuously monitors radiation level of process and effluent streams, provides alarm signals, and generates isolation and diversion signals when the measured radiation exceeds preset levels in accordance with the system design criteria and system description in Section 11.5.

5.0 ACCEPTANCE CRITERIA

- 5.1 The process and effluent radiological monitoring system ~~operates as described in Section 11.5.~~

5.2 Power shall be supplied to RMS computer cabinet, OJU, SRDC & local units as designed

5.3 Communications with Ratemeter, OJU, MMIS are verified