

## 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.: 177-8166  
SRP Section: 08.01 – Electric Power – Introduction  
Application Section: 8.01  
Date of RAI Issue: 08/31/2015

---

### **Question No. 08.01-2**

APR1400 DCD Section 8.2.1, System Description states the following Electric power from the transmission network to the onsite electrical distribution system is supplied by two physically independent circuits. The COL applicant is to identify those independent circuits (COL 8.2(1)). The APR1400 is designed to meet the requirements in 10 CFR Part 50, Appendix A, and GDC 2, 4, 5, 17, and 18 (References 1 through 5, respectively). Based on the statement above the APR1400 design is designed to meet the GDC 5 requirements, however, Table 8.1-2 indicates that GDC 5 is not applicable to the APR1400 design. Please clarify the inconsistency between the DCD Section 8.2.1 and Table 8.1-2.

### **Response**

The requirements in 10 CFR Part 50, Appendix A (GDC), Criterion 5 pertain to the sharing of structures, systems, and components (SSCs) between units. Since the APR1400 is designed as a single unit station with no shared SSCs, as stated in 8.2.2.1, 8.3.1.2.1, and 8.3.2.2.1, the APR1400 design is considered to meet the GDC 5 requirements.

Since these sections provide the basis stated, KHNP will revise Table 8.1-2 (1 of 8) to delete indication of GDC 5 as not applicable and to reflect "applicable" to Sections 8.2, 8.3.1, and 8.3.2.

---

### **Impact on DCD**

DCD Tier 2, Table 8.1-2 (1 of 8) will be revised as shown 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

Table 8.1-2 (1 of 8)

Criteria and Guidelines for Electric Power Systems

| Criteria                              |   | DCD Section  |       |       |     | Remarks                   |
|---------------------------------------|---|--------------|-------|-------|-----|---------------------------|
|                                       |   | 8.2          | 8.3.1 | 8.3.2 | 8.4 |                           |
| 1. Appendix A to 10 CFR Part 50 – GDC |   | Requirements |       |       |     |                           |
| GDC 2                                 | Design Bases for Protection Against Natural Phenomena | A            | A     | A     |     |                           |
| GDC 4                                 | Environmental and Dynamic Effects Design Bases        | A            | A     | A     |     |                           |
| GDC 5                                 | Sharing of Structures, Systems, and Components        | ↖ A          | ↖ A   | ↖ A   |     | <del>Not applicable</del> |
| GDC 17                                | Electric Power Systems                                | add A        | A     | A     | A   | delete                    |
| GDC 18                                | Inspection and Testing of Electric Power Systems      | A            | A     | A     | A   |                           |
| GDC 33                                | Reactor Coolant Makeup                                | A            | A     | A     |     |                           |
| GDC 34                                | Residual Heat Removal                                 | A            | A     | A     |     |                           |
| GDC 35                                | Emergency Core Cooling                                | A            | A     | A     |     |                           |
| GDC 38                                | Containment Heat Removal                              | A            | A     | A     |     |                           |
| GDC 41                                | Containment Atmosphere Cleanup                        | A            | A     | A     |     |                           |
| GDC 44                                | Cooling Water   | A            | A     | A     |     |                           |
| GDC 50                                | Containment Design Basis                              |              | A     | A     |     |                           |

(A) Requirements and criteria provided in the subject document are applied to the noted section.