

GDC 41, GDC 42, and GDC 43 relate to containment ESF atmosphere cleanup systems. Since the APR1400 design does not have ESF cleanup systems inside containment, these GDC do not apply to APR1400 ESF Filter Systems.

GDC 61

The staff found that GDC 61 applies to FHAEES. Section 9.4.2 of this SE documents the staff review of FHAEES against GDC 61.

Based on the staff review in Section 9.4.2 of this SER, the staff finds that the CRHS complies with the requirements of GDC 61.

FHAEES

GDC 64

Review of GDC 64 as it relates to compliance with RG1.52 as to the design, testing, and maintenance of ESF filter systems is discussed below.

6.5.1.4.1 Conformance to RG 1.52

The staff reviewed the provisions of the ESF filter systems in DCD Tier 2, Section 6.5.1, “Engineered Safety Feature Filter Systems.” The review was conducted to determine if the guidance of RG 1.52 was met.

DCD Tier 2, Section 6.5.1.1, “Design Bases,” states that the ESF Filter Systems are redundant, designed to seismic Category I, and are powered by an emergency bus that is backed up by an EDG. EDG The structural ability of the filters to operate after a DBA is addressed by their safety-related status and demonstrated by their seismic design. These are specified in DCD Tier 2, Table 3.2-1. Delete

By reviewing the specifications described above and comparing the ESF Filter Systems to RG 1.52, as documented DCD Tier 2, Table 6.5-2, the staff finds that the CRHS complies with the requirements of RG 1.52. Discussion on carbon adsorbers, in the following section, has more information to support this statement.

6.5.1.4.2 Carbon Adsorbers

DCD Tier 2, Table 6.5-1 specifies the use of activated charcoal and a design system efficiency of 99 percent for removal of iodine and organic iodides. The staff finds that this specification conforms to RG 1.52, Table 2.

Other than a stated commitment to meet the guidance in RG 1.52, the staff determined that there was insufficient detailed information in the DCD to demonstrate conformance to the provisions of RG 1.52. Therefore, on October 5, 2015, the staff issued RAI 251-8320, Question 06.05.01-1, the staff requested that the applicant provide details on design and testing in order to conform to RG 1.52:

1. The maximum charcoal loading for the adsorbent trains.
2. Design consideration of iodine desorption and adsorbent auto-ignition.
3. Carbon laboratory test method, whether ASTM D-3803 or another.