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.:	**29-7926**
SRP Section:	**03.02.01 – Seismic Classification**
Application Section:	**3.2.1**
Date of RAI Issue:	**06/15/2015**

Question No. 03.02.01-6

In DCD Tier 2, Table 3.2-1, the letdown heat exchanger supply and return piping between the valves CC-297, CC-301, CC-1685, and CC-1686 in division I, which appears to be part of the component cooling water system (CCW), is identified as seismic Category II, Quality Group D. This is supported in Figure 9.2.2-1 (Page 9.2-149). The letdown heat exchanger itself (part of the chemical and volume control system (CVCS)) is classified as seismic Category I, Quality Group C. This transition is not illustrated in the system figure. Please justify why a portion of CCW, a safety-related system, is not seismic Category I, and why its classification is not consistent with the heat exchanger that it supports. Updates to DCD Tier 2, Table 3.2-1 and associated system figures may be needed to clarify these classifications.

Response

The CVCS including the letdown heat exchanger is not required to perform any accident mitigation or safe shutdown function and the letdown line in the CVCS is automatically isolated by the engineered safety features actuation signal (ESFAS) following a LOCA. The cooling function for the letdown heat exchanger is not also required. Therefore the letdown heat exchanger supply and return piping between the valves CC-297, CC-301, CC-1685, and CC-1686 in the CCWS is classified as seismic Category II, Quality Group D in accordance with classification criteria of USNRC RG 1.26 and RG 1.29.

Supplemental Response – (Rev. 1)

This revised supplemental response is to clarify the specification difference of the shell and inlet/outlet piping portions of the CCW side of the letdown heat exchanger and to provide clear piping specification notation on the flow diagrams for the CCW system, Figure 9.2.2-1, of the DCD.

The shell side of the letdown heat exchanger is classified as seismic Class I, Quality Group C. Though the CCW cooling function for the heat exchanger is non-safety related, the shell was classified to a higher quality level to conservatively provide a higher degree of mechanical integrity of the heat exchanger and to provide uniformity in the overall manufacturing requirements of the heat exchanger. It was determined that there was no safety benefit for increasing the integrity requirements of the shell side inlet and outlet heat exchanger piping and that the classification should be consistent with the connected CCW piping.

The flow diagram for the CCWS will be revised to note the class break between the letdown heat exchanger shell and inlet/outlet piping .

In addition, the flow diagram for the CCWS will be revised for equipment not included in the CCWS to be marked in dotted line as indicated in Attachment.

Impact on DCD

DCD Tier 2 Figure 9.2.2-1 will be revised as indicated on 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.

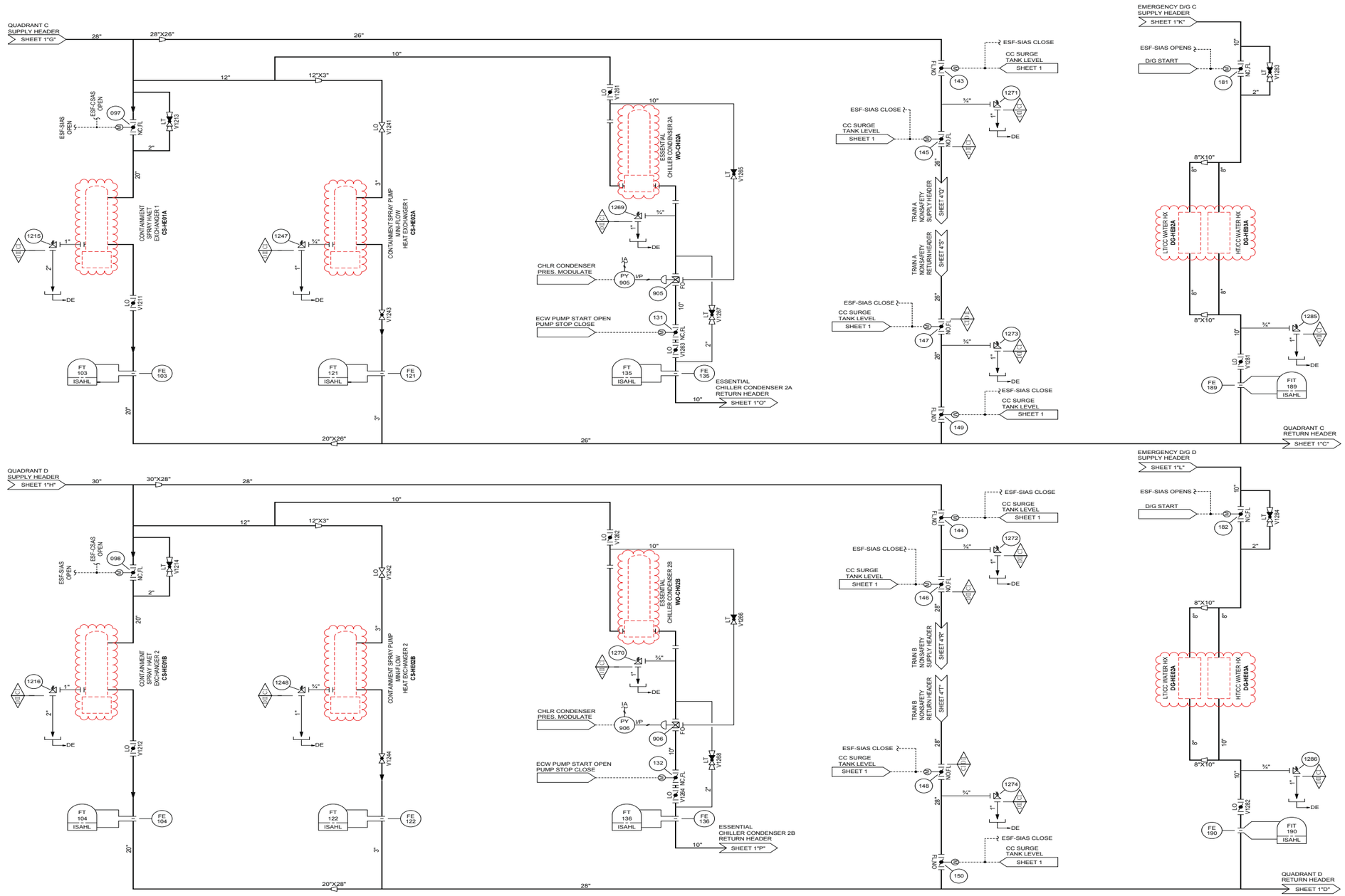

Figure 9.2.2-1 Component Cooling Water System Flow Diagram (Sheet 2 of 4)

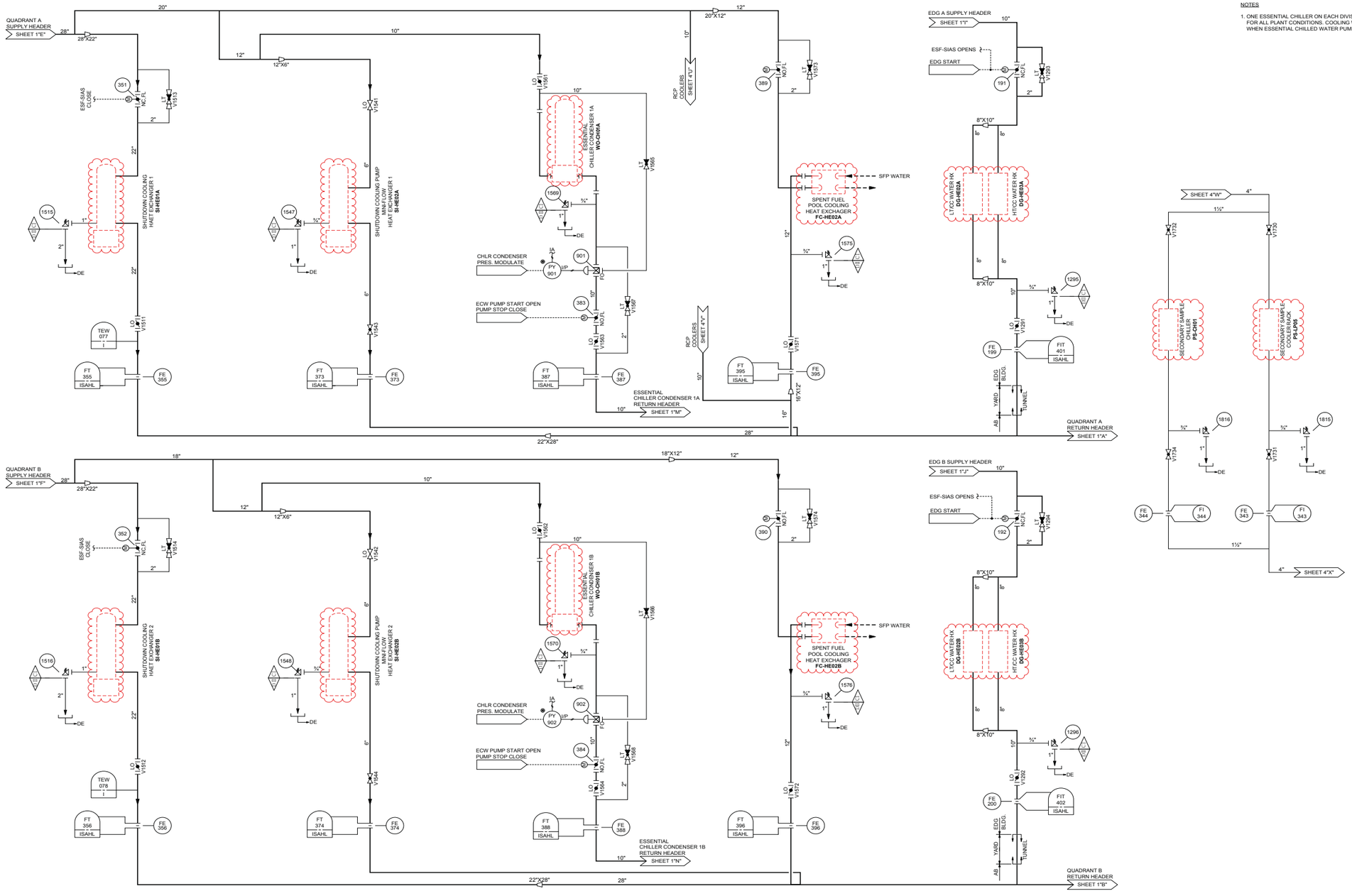

Figure 9.2.2-1 Component Cooling Water System Flow Diagram (Sheet 3 of 4)

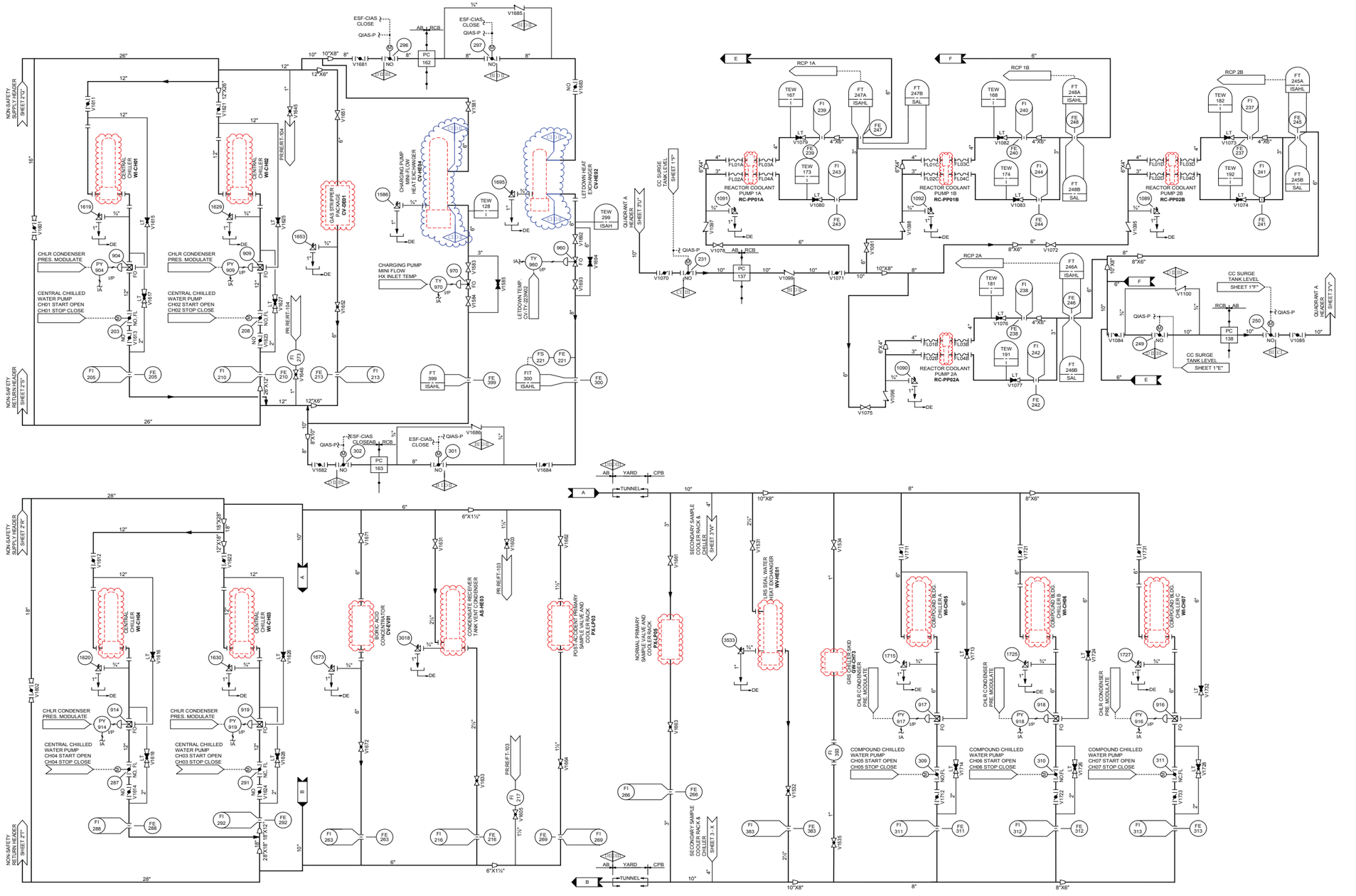

Figure 9.2.2-1 Component Cooling Water System Flow Diagram (Sheet 4 of 4)