
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.: 448-8557
SRP Section: 09.05.04 – Emergency Diesel Engine Fuel Oil Storage and Transfer System
Application Section: 9.5.4
Date of RAI Issue: 03/21/2016

Question No. 09.05.04-13

In response to RAI 152-8006, Question 09.05.04-4, the applicant described the emergency diesel engine fuel oil system (EDEFOS) leakage monitoring system and fuel oil storage tank (FOST) room sump to be able to contain potential oil leakage. The applicant is requested to confirm the sump has adequate capacity to confine the full content of the FOST. If not, describe the measures to be implemented to control the leakage and/or transfer of the excess fuel oil from the sump.

Response

The sump for each fuel oil storage tank is located in each diesel fuel oil storage tank vault. The sump volume is designed in accordance with appendix B, "Sump Volume" of Hydraulic Institute (HI) Standard 9.8. At the high level of the sump, one sump pump automatically starts. If the level reaches the high-high level of the sump, the other sump pump automatically starts; both pumps will run until reaching the low level of the sump. The sump sizing is not considered on confining the full content of the diesel fuel oil storage tank. However, for each diesel oil storage tank, walls are placed around each tank to a height that will confine the full contents of the diesel fuel oil storage tank. Also, a normally closed manual valve is provided, for preventing overflow of sump, at the piping between the diesel fuel storage tank vault and the sump. Therefore, the full contents of the diesel fuel oil storage tank can be pumped through the sump without spilling outside of the diesel fuel storage tank vault.

Impact on DCD

There is no impact on the DCD.

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.