

Response to SDAA Audit Question

Question Number: A-3.11-3

Receipt Date: 10/16/2023

Question:

10 CFR 52.137(a)(13) requires that standard design approvals include the list of electronic equipment important to safety that is required by 10 CFR 50.49(d).

Table 3C-3 indicates that control building room 003 and reactor building zones RXBG-5 and RXBG-7 include environmentally qualified electronics that exceed $1.0E+03$ rad total integrated dose (TID), the criteria for a harsh radiological environment. However, Table 3.11-1, "List of Environmentally Qualified Equipment Located in Harsh Environments," does not identify any equipment located in the control building or in reactor building zones RXBG-5 or RXBG-7. Please describe the environmentally qualified electronic equipment located in the control building and in zones RXBG-5 and RXBG-7 and update Table 3.11-1 to include this equipment. Any other electronic equipment located in a harsh environment that requires environmental qualification must also be included in Table 3.11-1.

Response:

As clarified in the response to SDAA Audit Question A.3.11.1.1-1, the development of the equipment list reflected in SDAA Table 3.11-1 specifically included consideration of equipment subject to the requirements of 10 CFR 50.49. In response to SDAA Audit Question A.3.11-2, SDAA Table 3C-3 "Designated Mild Environment Areas" was revised to include environmental qualification (EQ) zones CRB-3E, RXBG-5E, and RXBG-7E. Environmental qualification zone CRB-3E and the corridors in EQ zones RXBG-5E and RXBG-7E are mild environment areas for non-electronic equipment.

The response to SDAA Audit Question A.3.11-2 also revised SDAA Table 3C-2, "Designated Harsh Environment Areas" to include EQ zones CRB-3E, RXBG-5E, and RXBG-

7E. Environmental qualification zones CRB-3E, RXBG-5E, and RXBG-7E are harsh environment areas for electronic equipment. Environmental qualification zones CRB-3, CRB-3E, RXBG-5, RXBG-7, RXBG-5E and RXBG-7E are mild environments for mechanical and electrical equipment, which are excluded from the 3.11 EQ program by 10 CFR 50.49(c).

SDAA Tables 3C-2 and 3C-3 do not identify electronics that require environmental qualification to a total integrated dose greater than 1.0E+03 rad. The EQ Master List is sorted by the harsh or mild classification of EQ zones to determine the electronic equipment included in SDAA Table 3.11-1.

No electronic equipment is located in EQ Zones CRB-3E, RXBG-5E, or RXBG-7E requiring environmental qualification under 10 CFR 50.49.

No changes to the SDAA are necessary.