2.4.5 Priority and Actuator Control System

1.0 Description

The priority and actuator control system (PACS) is a safety-related system.

The PACS has the following safety related functions:

- Prioritizes actuation requests from I&C systems.
- Performs essential equipment protection.
- Performs drive actuation.
- Performs drive monitoring.

2.0 Arrangement

2.1 The PACS equipment is located as listed in Table 2.4.5-1—Priority and Actuator Control System Equipment.

2.2 Physical separation exists between the four divisions of the PACS.

3.0 Seismic I Classifications

3.1 Equipment identified as Seismic Category I in Table 2.4.5-1 can withstand seismic design basis loads without loss of safety function.

4.0 I&C Design Features, Displays and Controls

4.1 The order of priority of automatic functions performed by PACS is listed from highest to lowest:

- Safety-related I&C functions.
- Non-safety related I&C functions.

4.2 Isolation devices exist in the signal paths between the PACS and the non-Class 1E I&C systems.

4.3 The PACS equipment classified as Class 1E in Table 2.4.5-1 can perform its safety function when subjected to electromagnetic interference (EMI), radio-frequency interference (RFI), electrostatic discharges (ESD), and power surges.

5.0 Electrical Power

5.1 The equipment identified as Class 1E in Table 2.4.5-1 receives power from its respective Class 1E division.

6.0 System Inspections, Tests, Analyses, and Acceptance Criteria

6.1 Table 2.4.5-2—Priority and Actuator Control System ITAAC specifies the inspections, tests, analyses, and acceptance criteria for the PACS.

Table 2.4.5-1—Priority and Actuator Control System Equipment

Equipment Description	Equipment Tag Number (1)	Equipment Location	Seismic Class	IEEE Class 1E
Priority and Actuator Control System Division 1 Cabinets	30CLE6	Safeguard Building 1	I	Yes
Priority and Actuator Control System Division 2 Cabinets	30CLF6	Safeguard Building 2	I	Yes
Priority and Actuator Control System Division 3 Cabinets	30CLG6	Safeguard Building 3	I	Yes
Priority and Actuator Control System Division 4 Cabinets	30CLH6	Safeguard Building 4	I	Yes

1) Equipment Tag numbers are provided for information and are not part of the design certification

Table 2.4.5-2—Priority and Actuator Control System ITAAC

Commitment Wording	Inspection, Analysis or Test	Acceptance Criteria
2.1 The PACS equipment is located as listed in Table 2.4.5-1.	Inspections will be performed of the location of the PACS equipment.	The equipment listed in Table 2.4.5-1 is located as listed in Table 2.4.5-1.
2.2 Physical separation exists between the four divisions of the PACS.	Inspections will be performed to verify that the divisions of the PACS are located in separate Safeguard Buildings.	The four divisions of the PACS are located in separate buildings.
3.1 Equipment identified as Class 1E in Table 2.4.5-1 can withstand a design basis seismic event without loss of safety function.	Inspections, type tests, tests, analyses or a combination of tests and analyses will be performed on the equipment designated as Seismic Category I in Table 2.4.5-1.	(1) A report exists and concludes that the equipment listed as Seismic Category I in Table 2.4.5-1 is installed as designed. (2) A report exists and concludes that the equipment listed as Seismic Category I in Table 2.4.5-1 can withstand seismic design basis loads without loss of safety function.
4.1 The order of priority of automatic functions performed by PACS is listed from highest to lowest: • Safety related I&C functions • Non-safety related I&C functions	Operational tests will be performed using test signals to verify the order of priority of automatic functions performed by PACS.	The order of priority of automatic functions performed by PACS is listed from highest to lowest: • Safety related I&C functions • Non-safety related I&C functions
4.2 Isolation devices exist in the signal paths between the PACS and the non-Class 1E I&C systems.	Inspections will be performed to verify the existence of isolation devices.	Isolation devices exist in the signal paths between the PACS and the non-Class 1E I&C systems.
4.3 The PACS equipment classified as Class 1E in Table 2.4.5-1 can perform its safety function when subjected to EMI, RFI, ESD, and power surges.	Type tests, tests, analyses or a combination of these will be performed for the Class 1E equipment listed in Table 2.4.5-1.	A report exists and concludes that the equipment listed as Class 1E in Table 2.4.5-1 can perform its safety function when subjected to EMI, RFI, ESD, and power surges.
5.1 The equipment identified as Class 1E in Table 2.4.5-1 receives power from its respective Class 1E division.	Inspections will be performed to verify the source of power for Class 1E equipment.	The Class 1E equipment listed in Table 2.4.5-1 is powered from its respective Class 1E division.