2.4.8 Leakage Detection System

Design Description

1.0 System Description

The leakage detection system supports the identification of reactor coolant pressure boundary (RCPB) leakage and leakage from the main steam line (MSL) piping inside the containment (i.e., from the steam generators to the first anchor point location at the Containment Building penetration).

2.0 I&C Design Features, Displays, and Controls

2.1 Containment air cooler condensate flow rate is indicated on the PICS operator workstations in the MCR.

2.2 MSL local humidity indication is provided on the PICS operator workstations in the MCR.

2.3 Containment air cooler condensate flow rate sensors support RCS leakage detection.

2.4 MSL local humidity detection system supports main steam line leakage detection.

Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.4.8-1 lists the Leakage Detection System ITAAC.

Table 2.4.8-1—Leakage Detection System ITAAC

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
2.1	Containment air cooler condensate flowrate is indicated on the PICS operator workstations in the MCR.	Tests will be performed to verify that the containment air cooler condensate flowrate is indicated on the PICS operator workstations in the MCR by using test input signals to PICS.	Containment air cooler condensate flowrate is indicated on the PICS operator workstations in the MCR.
2.2	MSL local humidity indication is provided on the PICS operator workstations in the MCR.	Tests will be performed to verify that the MSL local humidity indication is indicated on the PICS operator workstations in the MCR by using test input signals to PICS.	MSL local humidity is indicated on the PICS operator workstations in the MCR.
2.3	Containment air cooler condensate flowrate sensors support RCS leakage detection.	Tests will be performed using test input signals to verify containment air cooler condensate flowrate sensors support RCS leakage detection.	Containment air cooler condensate flowrate sensors can detect a flow of 0.5 gpm.
2.4	MSL local humidity detection system supports main steam line leakage detection.	Tests, analyses, or combination of tests and analyses will be performed to verify MSL local humidity detection system supports main steam line leakage detection.	MSL local humidity detection system can detect MSL leakage of 0.1 gpm within 4 hours.