

2.4.8 Leakage Detection System

1.0 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 Reactor Building fan cooler condensate collector flow indication is provided in the MCR.

2.2 MSL humidity detection indication is provided in the MCR.

3.0 System 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 (2 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
2.1	Reactor Building (RB) cooler condensate flow measurement indication is provided in the MCR. RB fan cooler condensate collector flow indication is provided in the MCR.	<ul style="list-style-type: none"> a. Analyses and tests will be performed to design RB cooler condensate flow measurement equipment. b. Test of the as-installed RB cooler condensate flow detection equipment will be performed. 	<ul style="list-style-type: none"> a. A design report exists and concludes that the as-designed RB cooler condensate flow detection equipment can detect condensate flow of 0.5 gpm. b. The installed RB cooler condensate flow detection equipment can detect a flow of 0.5 gpm.

Table 2.4.8-1—Leakage Detection System ITAAC (2 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
2.2	MSL humidity detection indication is provided in the MCR.	<ul style="list-style-type: none"> a. Analyses and tests will be performed to design the MSL humidity detection equipment. b. Inspections of the installation of the MSL humidity detection equipment will be performed and deviations to the design report will be reconciled. 	<ul style="list-style-type: none"> a. A design report exists and concludes that the as-designed MSL humidity detection equipment can detect MSL leakage of 0.1 gpm. b. The installed MSL humidity detection equipment complies with the design and deviations have been reconciled.