

2.9.4 Sampling Activity Monitoring System

1.0 Description

The sampling activity monitoring system provides the following safety-related function:

- Provides a radioactivity indication that initiates isolation of the main control room (MCR) ventilation intake.

2.0 Arrangement

2.1 The functional arrangement of the sampling activity monitoring system is shown in Figure 2.9.4-1—Sampling Activity Monitoring System Functional Arrangement.

2.2 The location of the sampling activity monitoring system equipment is as listed in Table 2.9.4-1—Sampling Activity Monitoring System Equipment Mechanical Design.

3.0 Mechanical Design Features

3.1 Equipment identified as Seismic Category I in Table 2.9.4-1 can withstand a design basis seismic load without loss of function as listed in Table 2.9.4-1.

4.0 Electrical Power Design Features

4.1 The components designated as Class 1E in Table 2.9.4-2—Sampling Activity Monitoring System Equipment I&C and Electrical Design are powered from a Class 1E division in a normal or alternate feed condition.

5.0 Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.9.4-3—Sampling Activity Monitoring System Inspections, Tests, Analyses, and Acceptance Criteria specifies the inspections, tests, analyses, and acceptance criteria for the sampling activity monitoring system.

Table 2.9.4-1—Sampling Activity Monitoring System Equipment Mechanical Design

Equipment Description	Equipment Tag Number ⁽¹⁾	Equipment Location	Function	Seismic Category
MCR Ventilation Intake Radioactivity Monitor	30KLK65CR001	Safeguard Building Division 2	Indicate Radioactivity Levels	I
MCR Ventilation Intake Radioactivity Monitor	30KLK65CR002	Safeguard Building Division 2	Indicate Radioactivity Levels	I
MCR Ventilation Intake Radioactivity Monitor	30KLK66CR001	Safeguard Building Division 3	Indicate Radioactivity Levels	I
MCR Ventilation Intake Radioactivity Monitor	30KLK66CR002	Safeguard Building Division 3	Indicate Radioactivity Levels	I

1) Equipment tag numbers are provided for information only and are not part of the certified design.

**Table 2.9.4-2—Sampling Activity Monitoring System
Equipment I&C and Electrical Design**

Equipment Description	Equipment Tag Number ⁽¹⁾	Equipment Location	IEEE Class 1E Source ⁽²⁾
MCR Ventilation Intake Radioactivity Monitor	30KLL65CR001	Safeguard Building Division 2	Yes
MCR Ventilation Intake Radioactivity Monitor	30KLL65CR002	Safeguard Building Division 2	Yes
MCR Ventilation Intake Radioactivity Monitor	30KLL66CR001	Safeguard Building Division 3	Yes
MCR Ventilation Intake Radioactivity Monitor	30KLL66CR002	Safeguard Building Division 3	Yes

- 1) Equipment tag numbers are provided for information only and are not part of the certified design.
- 2) Enter Yes or No.

Table 2.9.4-3—Sampling Activity Monitoring System Inspections, Tests, Analyses, and Acceptance Criteria

	Commitment Wording	Inspection, Analysis or Test	Acceptance Criteria
2.1	The functional arrangement of the sampling activity monitoring system is as shown on Figure 2.9.4-1.	Inspections of the as-built system as shown on Figure 2.9.4-1 will be conducted.	The as-built sampling activity monitoring system conforms with the functional arrangement as shown in Figure 2.9.4-1.
2.2	The location of the sampling activity monitoring system equipment is as listed in Table 2.9.4-1.	An inspection will be performed of the location of the equipment listed in Table 2.9.4-1.	The equipment listed in Table 2.9.4-1 is located as listed in Table 2.9.4-1.
3.1	Equipment identified as Seismic Category I in Table 2.9.4-1 can withstand a design basis seismic load without loss of function as listed in Table 2.9.4-1.	<p>a. Inspections will be performed of the equipment identified as Seismic Category I in Table 2.9.4-1.</p> <p>b. Type tests, tests, analyses, or a combination of tests and analyses will be performed on the equipment designated as Seismic Category I in Table 2.9.4-1.</p>	<p>a. The equipment designated as Seismic Category I in Table 2.9.4-1 is installed as designed.</p> <p>b. The equipment designated as Seismic Category I in Table 2.9.4-1 can withstand a design basis seismic load without loss of function.</p>
4.1	The components designated as Class 1E in Table 2.9.4-2 are powered from a Class 1E division in a normal or alternate feed condition.	<p>a. Testing will be performed for components designated as Class 1E in Table 2.9.4-2 by providing a test signal in each normally aligned division.</p> <p>b. Testing will be performed for components designated as Class 1E in Table 2.9.4-2 by providing a test signal in each division with the alternate feed aligned to the divisional pair.</p>	<p>a. The test signal provided in the normally aligned division is present at the respective Class 1E component identified in Table 2.9.4-2.</p> <p>b. The test signal provided in each division with the alternate feed aligned to the divisional pair is present at the respective Class 1E component identified in Table 2.9.4-2.</p>