

3.7 Accident Monitoring Instrumentation

1.0 Description

The accident monitoring instrumentation (AMI) provides plant process variable information and system status, known as post accident monitoring (PAM) variables, to the operator in the main control room (MCR) to permit the operator to perform the following:

- Preplanned manual safety functions.
- Capability to assess plant conditions, safety system performance and determine appropriate actions to take to respond to abnormal events.
- Capability to bring the plant to a safe shutdown condition.

The instruments that are determined as AMI are contained in various plant systems. The performance, design, and qualification of the AMI are selected in accordance with the accident management functions defined by the emergency procedures, emergency guidelines, and licensing basis documents.

2.0 Analyses

2.1 AMI that are credited in emergency procedures and that are not addressed by existing ITAAC are identified.

3.0 Design Features

3.1 The AMI identified in 3.7.2.1 are provided with divisional separation.

3.2 The AMI identified in 3.7.2.1 can withstand seismic design basis loads without loss of safety function.

3.3 The AMI identified in 3.7.2.1 that monitor type A, B, and C type variables are powered from the Class 1E power sources specified in Table 3.7-1.

3.4 The AMI identified in 3.7.2.1 will perform their function in the environments that exist before and during the time required to perform their function.

4.0 System Inspections, Tests, Analyses, and Acceptance Criteria

Table 3.7-2 lists the accident monitoring instrumentation ITAAC.

Table 3.7-1—Class 1E Power for Accident Monitoring Instrumentation

Location of Instrument to Monitor Type A, B, or C PAM Variables	Class 1E Power Source	
	Normally Aligned	Alternate Feed Aligned
Division 1	Division 1	Division 2
Division 2	Division 2	Division 1
Division 3	Division 3	Division 4
Division 4	Division 4	Division 3

**Table 3.7-2—Accident Monitoring Instrumentation ITAAC
(2 Sheets)**

Commitment Wording	Inspections, Tests, Analyses	Acceptance Criteria
<p>2.1 AMI that are credited in emergency procedures and that are not addressed by existing ITAAC are identified.</p>	<p>An analysis will be performed to identify those instruments that are credited in emergency procedures and that are not addressed by existing ITAAC. (divisional separation, seismic design, Class 1E power source, and environmental qualification).</p>	<p>A report exists and provides a list of AMI that monitor type A, B, C, and D variables credited in emergency procedures and that are not addressed by existing ITAAC (divisional separation, seismic design, Class 1E power source, and environmental qualification).</p>
<p>3.1 The AMI identified in 3.7.2.1 are provided with divisional separation.</p>	<p>Inspection will be performed to verify the AMI identified in 3.7.2.1 is divisionally separated.</p>	<p>The AMI identified in 3.7.2.1 are divisionally separated.</p>
<p>3.2 The AMI identified in 3.7.2.1 can withstand seismic design basis loads without loss of function.</p>	<p>a. Type tests, analyses, or a combination of type tests or analyses will be performed on the AMI identified in 3.7.2.1 using analytical assumptions, or under conditions, which bound the Seismic Category I design requirements.</p> <p>b. Inspections will be performed of the as-installed AMI identified in 3.7.2.1 to verify that the instruments including anchorage are installed as specified on the construction drawings.</p>	<p>a. A report exists and concludes that the AMI identified in 3.7.2.1 can withstand seismic design basis loads without the loss of function.</p> <p>b. Inspection reports exist and conclude that the AMI identified in 3.7.2.1 including anchorage are installed as specified on the construction drawings.</p>
<p>3.3 The AMI identified in 3.7.2.1 that monitor type A, B, and C type variables are powered from the Class 1E power sources specified in Table 3.7-1.</p>	<p>a. Testing will be performed to verify the Class 1E power sources specified in Table 3.7-1 for the type A, B, and C AMI identified in 3.7.2.1 by providing a test signal in each normally aligned division.</p>	<p>a. The test signal provided in the normally aligned division as specified in Table 3.7-1 is present at the type A, B, and C AMI identified in 3.7.2.1.</p>

**Table 3.7-2—Accident Monitoring Instrumentation ITAAC
(2 Sheets)**

Commitment Wording	Inspections, Tests, Analyses	Acceptance Criteria
	<p>b. Testing will be performed to verify the Class 1E power sources specified in Table 3.7-1 for the type A, B, and C AMI identified in 3.7.2.1 by providing a test signal in each division with the alternate feed aligned to the divisional pair.</p>	<p>b. The test signal provided in each division with the alternate feed aligned to the divisional pair as specified in Table 3.7-1 is present at the type A, B, and C AMI identified in 3.7.2.1.</p>
<p>3.4 The AMI identified in 3.7.2.1 will perform their function in the environments that exist before and during the time required to perform their function.</p>	<p>Type test, tests, analyses or a combination of tests and analyses will be performed to demonstrate the ability of the AMI identified in 3.7.2.1 to perform their function in the environments that exist before and during the time required to perform their function.</p>	<p>A report exists and concludes that the AMI identified in 3.7.2.1 are qualified to perform their associated function in the environments that exist before and during the time required to perform their function.</p>