

2.4.6 Plant Fire Alarm System

1.0 Description

The plant fire alarm system (PFAS) is a non-safety related alarm signaling system which provides control and monitoring of plant fire protection, suppression and detection system parameters.

The PFAS provides the following non-safety related functions:

- Provides a fire alarm management interface to the operators.
- Controls and monitors plant fire suppression and detection systems.
- Provides the main control room (MCR) operators with information displays and supports automatic and manual control of fire protection equipment.

2.0 I&C Design Features, Displays and Controls

2.1 The PFAS provides the displays listed in Table 2.4.6-1—Plant Fire Alarm System Displays and Alarms – Main Control Room and Remote Shutdown Station.

2.2 The as-built plant fire alarm system is consistent with the post-fire safe shutdown analyses.

3.0 Electrical Power

3.1 The PFAS is provided with both an electrically supervised primary and secondary power source that will transfer automatically to the secondary power source upon loss of the primary source.

3.2 A trouble signal indication is provided in the MCR upon a loss of either power source to any local fire control panel (LFCP) or workstation.

4.0 System Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.4.6-2 lists the PFAS ITAAC.

Table 2.4.6-1—Plant Fire Alarm System Displays and Alarms – Main Control Room and Remote Shutdown Station

Display	Associated Alarms
<p>PFAS graphics display with specific alarm information. Turbine Building alarm signals also displayed at PFAS.</p>	<ul style="list-style-type: none"> • Common PFAS Fire Alarm signal at process information and control system (PICS) • Common PFSA Supervisory Alarm signal at PICS • Common PFAS System Trouble signal at PICS

Table 2.4.6-2—Plant Fire Alarm System ITAAC

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
2.1	The PFAS provides the displays listed in Table 2.4.6-1.	Testing will be performed to verify the existence of the displays on PICS at the MCR and the RSS as listed in Table 2.4.6-1.	<ul style="list-style-type: none"> a. The displays listed in Table 2.4.6-1 exist on the PICS in the MCR and the RSS. b. Turbine Building alarm system signals also displayed at PFAS with same signals listed in Table 2.4.6-1.
2.2	The as-built plant fire alarm system is consistent with the post-fire safe shutdown analyses.	An inspection will be performed.	An inspection report documents that the as-built plant fire alarm system is consistent with the post-fire safe shutdown analysis.
3.1	The PFAS is provided with both an electrically supervised primary and secondary power source that will transfer automatically to the secondary source upon loss of the primary source.	Tests will be performed to verify the transfer of power of the PFAS from the primary source of power to the secondary source.	The PFAS is provided with an electrically supervised primary and secondary power source that will transfer automatically to the secondary source upon loss of the primary source.
3.2	A trouble signal indication is provided in the MCR upon a loss of either power source to any LFCP or workstation.	Testing will be performed to verify the existence of a trouble signal indication in the MCR when either the primary or secondary power source is lost at any LFCP or workstation.	A trouble signal indication is provided in the MCR upon a loss of either power source to any LFCP or workstation.