



November 2010

Welcome to the Plant Protection Report

Welcome to the F.E. Moran Special Hazard Systems newsletter - The Plant Protection Report. Inside you will find information about the most current industry trends and solutions to issues that plants face every day.

We hope that this newsletter will help you with the unique challenges that you face protecting people plant and production.

Sincerely,

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What is Your Fire Panel Trying to Tell You?

In a perfect world, the Fire Alarm Control Panel (FACP) would be a system that only required attention during premeditated events such as a valve being closed off for system maintenance or for inspection and testing purposes. For many plant employees, it's "that control box on the wall" that nobody wants to manage. The alarm systems that control a power generating plant's fire protection systems can be confusing to the personnel who do not routinely operate and maintain them.

When operators do not thoroughly understand how FACP's function and do not know how to appropriately respond to their signals, the consequences can be devastating. Few emergencies in a power generating plant are more threatening than a fire condition. Fortunately, this scenario can often be avoided by educating plant staff about how to properly utilize FACP's.



Identifying Panel Types

The first step in understanding the functionality of FACP's is identifying the type of system that is utilized in the facility. Today's fire protection system control panels range from basic hardwired panels to the sophisticated addressable/intelligent type. Variables such as hazard type, age of the system and criteria required by the specifying engineer all influence the type of system that is employed.

How do FACP's Work?

The early hardwired FACP's relied on internal jumpers and relay logic to perform any functions outside of basic general alarm, trouble or supervisory signaling. Over time, relay logic technology has been replaced with onboard programming through proprietary software that is installed from the fire alarm technician's personal computer. Using this software, the system can be manipulated to generate a specific reaction to various inputs. Latter generation hardwired FACP's incorporate microprocessor controls programmed through their keypads that incorporate basic logic programming, eliminating the need for relays and non-supervised internal interconnecting wiring.

Interpreting Signals

In a typical day, an operator can encounter hundreds, or even thousands, of alarms in the power plant control room. The catalysts for these alarms vary in significance and it can be difficult to prioritize these alarms, especially if there is not an alarm management system in place. Deciphering FACP signals begins with comprehension of the basic Fire Alarm System messaging, including the visual cues, implications of each message and understanding what types of events trigger specific alarms.

Each signal is distinct for obvious reasons and demands that it is addressed accordingly in a timely manner. Unfortunately, service teams often arrive at a jobsite to find a FACP in alarm, trouble or supervisory mode, with the panel having been silenced and ignored. FACP signals are designed to mitigate risk and effectively notify staff about emergencies. Disregarding these signals thwarts the effectiveness of the FACP and puts plant assets and lives at risk.

Why do FACP Signals Go Ignored?

The reasons that these vital signals are often disregarded are abundant but they range from inadequately trained personnel to cryptic messaging. At times other tasks take precedence over attending to FACP alarms because staff members do not fully understand the gravity of some of the signals. The unavailability of spare parts for the system can also result in perpetually active alarms. Other explanations include vague drawings, lack of cable tabs for the system wiring and incomplete or missing operation and maintenance manuals. Some plants even bypass a relay or circuit so that production is not temporarily interrupted.

Educating Plant Staff to Successfully Manage FACP's

FACP's are implemented as a measure of protection to inform operators of potential or impending risks. However, when plant staff is not thoroughly educated about the functionality and associated indications of FACP's, the systems are rendered ineffective. Plant owners rely on operators to accurately interpret these signals and take immediate action to prevent issues from escalating. When signals do not receive timely response or they are overlooked altogether, risk levels are elevated

Putting a training program into practice is the best way to ensure that staff will understand proper protocol for various scenarios related to the FACP. A comprehensive curriculum should include areas such as: understanding hazards pertinent to the environment, identifying critical FACP components, FACP and valve operation and system programming. Whether staff simply need a review of FACP basics or in-depth instruction is necessary, having staff that is well-versed in these areas is a long-term investment. In the aftermath of a fire, it is too late to find out that a disaster could have been averted had plant staff fully understood the implications of an FACP signal.

Interpreting Industry Standards – NFPA 13

Staying informed of the most current NFPA standards can be challenging for plants.

A common misconception that exists is related to NFPA 13, the code that regulates the installation of sprinkler systems. The erroneous belief is that dry pipe systems must deliver water to the inspection test connection in 60 seconds, regardless of whether or not a quick opening device was used.



The accurate interpretation is that a system size that does not exceed 500 gallons is permitted without a quick opening device and is not required to meet any specific water delivery requirements to the inspection test connection. Systems that are 750 gallons or less shall be permitted with a quick opening device and similarly are not required to meet specific water delivery requirements.

Previously, it was difficult to find this information because in because it was listed in the standard's appendix. The 2007 version of the standard now includes the information within the main body of the requirements.

F.E. Moran Special Hazard Systems Exceeds Industry Standard Safety Rating

F.E. Moran Special Hazard Systems has achieved an Interstate Experience Modification Rate (EMR) of .73; a score that is significantly better than the industry standard. An in-depth safety program that is employed at every project has been integral in achieving this score. The program includes aspects such as job hazard analysis, electrical safety, fire protection and frequent safety meetings throughout the course of every project.

Does Your Plant Staff Know How to Protect Your Facility from Fires?



In the event of an emergency, plant staff members are forced to react quickly to safeguard the plant. Does your staff have the knowledge to make the right decisions?

Call F.E. Moran Plant Services today to learn about how a customized training program can help teach your plant staff how to maximize the performance of your fire protection system in case of a fire. (217) 819-5333